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NORTHERN DEVELOPMENT - AN
OVERVIEW OF SOCIAL CONSEQUENCES
WITH SPECIAL REFERENCE TO ALCOHOL
PROBLEMS

Funding Program Report





ROYAL COMMISSION ON THE NORTHERN ENVIRONMENT

J.E.J. FAHLGREN, COMMISSIONER

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OVERVIEW OF SOCIAL CONSEQUENCES
WITH SPECIAL REFERENCE TO ALCOHOL
PROBLEMS

by

The Northern Development
Research Group

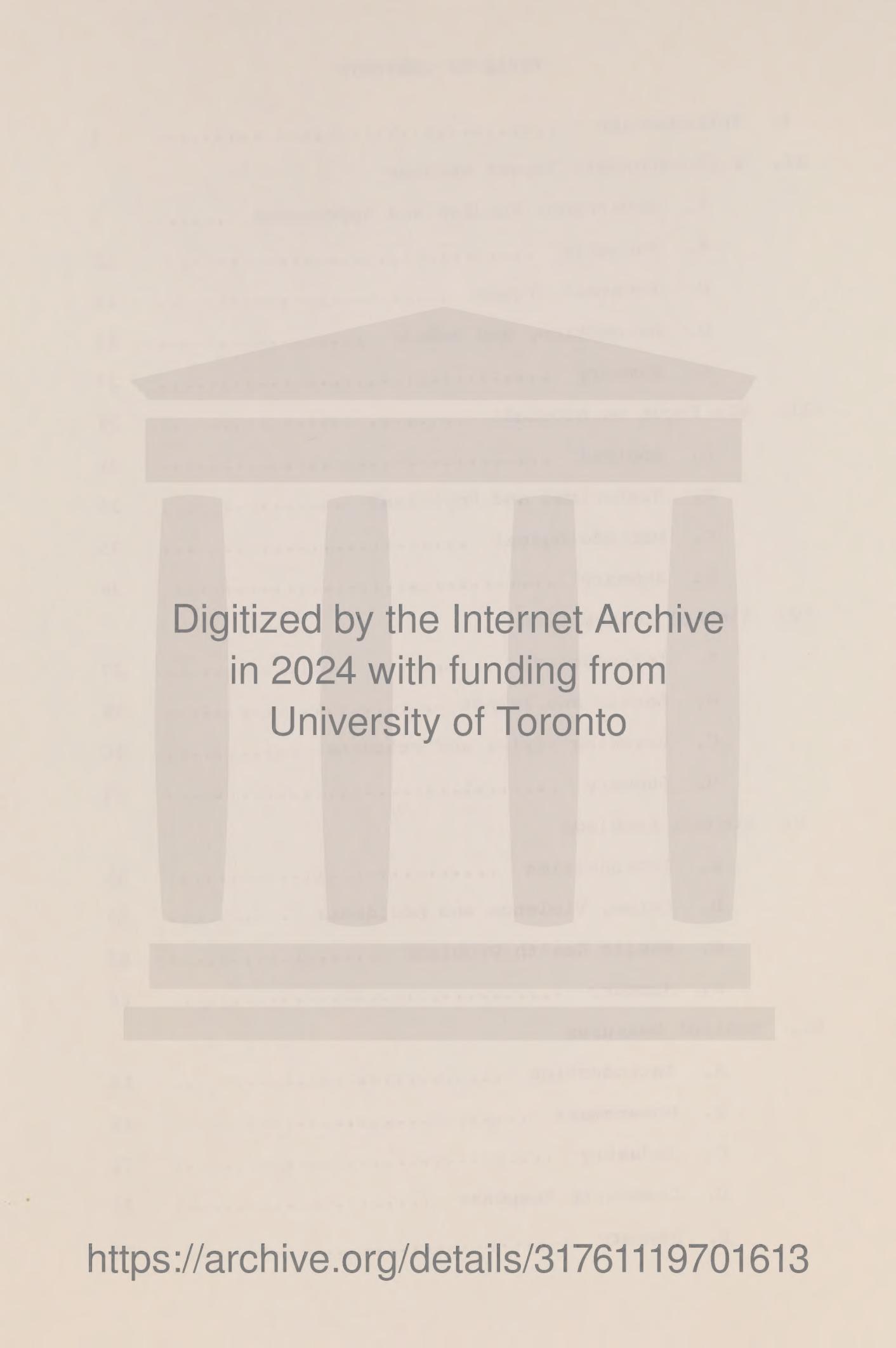
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Members of the Group

The Northern Development Research Group is an informal affiliation of researchers with a common interest in northern development and related social issues. The group was assembled for this project, but individual members have been involved in related activity over the last three years.

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I. INTRODUCTION

Most of the people living in Canada reside within easy travel of the southerly boundary of the country. However, the northern areas are vast, sparsely populated, rich in natural resources and not easily accessible to most southerners.

In Ontario, the three northwestern districts of Kenora, Rainy River and Thunder Bay occupy nearly 50% of the area of the province and contain only 3% of the population (Ministry of Natural Resources, 1974). This region extends over 200,000 square miles, an area only slightly smaller than France. With the exception of the City of Thunder Bay (approximately 110,000 population), most of the communities are under 10,000 population, and the largest community north of the 50th parallel is Sioux Lookout with 3,100 residents (Hartt, 1978). This region of Ontario is rich in mineral resources, lakes and rivers, wildlife and forests. It has a potential for development that has not gone unnoticed. One perspective is that "the north is often thought of as a storehouse of wealth supporting the economy of the Province" (Hartt, 1978: 7). A contrasting view is that the natural beauty and cultural traditions, especially those of the native inhabitants, must be preserved at all costs (A. Rickard, 12/5/77).

In the Ontario north, as well as other areas of Canada, a number of major resource development projects are underway or proposed (e.g., Hartt, 1978: 9-12). These include hydro-electric projects (e.g., Quebec, Ontario), oil and gas

extraction (e.g., Alberta, the Northwest Territories), oil and gas pipeline construction (e.g., the Yukon, Alberta, other provinces), mining (e.g., Ontario and B.C.) and logging (e.g., B.C. and Ontario). Many of these projects have the potential for major impact on the area and its residents. Considering such factors as the large scale of some of these projects, the nature and relatively small size of host communities, and the type of workers drawn to the work sites, one can expect various social consequences from rapid economic development. For example, it is probably no coincidence that for at least some of the regions of Canada where primary industry dominates the economy the rates of alcohol consumption and prevalence of certain alcohol-related problems are above average. This is evident in the northern territories (Non-Medical Use of Drugs Directorate, 1976; Wong, 1975) as well as in north western Ontario (Giesbrecht, Brown, de Lint and Lambert, 1972).

The main purpose of this paper is to examine social problems related to rapid economic development in isolated areas. Although funding for this project is from the Royal Commission on the Northern Environment (Ontario), work based on other areas of Canada as well as that from the recent Alaskan experience is included. There are likely many similarities between the northern territories and northern Ontario both with regard to host communities and the impact of development. Therefore, the geographic scope is somewhat

broader than the Province of Ontario. In this report we pay special attention to alcohol: consumption rates, consequences of heavy consumption, and control measures related to alcohol consumption and problems are considered.

The methods used in conducting this study, described in more detail in Appendix A, were as follows: selection of information from reports, papers and statistical series available in general and specialized libraries; correspondence with major companies and unions involved in primary industry; and a few exploratory interviews with representatives of private industry in northern Ontario.

Our substantive focii are clearly not comprehensive. We do not seek to report on all social consequences but focus on "social problems", particularly alcohol-related problems. This emphasis must be kept in mind. However, as we hope to demonstrate below, these topics have frequently been neglected in social impact studies. A more extensive project may have investigated other social consequences which may accompany development. For example, the revitalization of community pride, the reorganization of social networks, or the introduction of new ideas, skills and leisure patterns may be concomitants of rapid economic development.

The report is organized into seven substantive sections. First of all social impact studies are examined: What types are there? What assumptions and models predominate? Second, the reasons for focusing on alcohol are noted. The next three sections deal with alcohol consumption,

alcohol-related problems, and control measures. Then the responses to our letter survey and preliminary interviews are presented. The final section provides suggestions for monitoring alcohol consumption and alcohol-related problems in development settings.

II. SOCIO-ECONOMIC IMPACT STUDIES

The socio-economic impact studies conducted in frontier areas of northern Canada or Alaska can be grouped by sponsor or participants as follows:

- (1) government*
- (2) private industry
- (3) other interest groups.

The purpose of this section is to outline some social impact studies of the above groups in order to delineate their varying perspectives. It should be noted that perspectives may vary within one group. For example, the government department or the type of industry conducting the study may influence the viewpoint. It should also be noted that the perspectives or views with regard to any of the roles or departments may change, depending on the party in power or changes in influences over time.

A. Government Studies and Approaches

Government policies and objectives for the north are complex because of the many levels of government and numerous departments involved. For example, the federal government has several departments which deal exclusively with the north, such as the Department of Indian Affairs and Northern Development. In addition, the Department of Regional and

*It should be noted that government and industry perspectives do in fact represent interest groups, but these bodies are examined because they represent major influences for development in the north.

Economic Expansion, Health and Welfare, and other departments, also have an impact on affairs in the north. The responsibilities of various government mandates overlap and at times are in conflict. Various roles, such as licensing, taxation, providing housing, supplies, employment, policing, human rights, transportation, health, welfare and environment all potentially have an influence on communities experiencing rapid development. For example, government involvement in licensing and taxation may be at odds with health and welfare concerns, especially with regard to the sale of liquor.

Most government documents dealing with social impact studies of economic development in the north are the result of work conducted by the Department of Indian Affairs and Northern Development. This department is responsible for coordinating government activities north of 60°. The objectives of this department are outlined in their report "Canada's North, 1970 - 1980":

To provide for a higher standard of living, quality of life and equality of opportunity for northern residents by methods which are compatible with their own preferences and expectations.

To maintain and enhance the northern environment with due consideration to economic and social development.

To encourage viable economic development within regions of the Northern Territories so as to realize their potential contribution to the national economy and the material wellbeing of Canadians. (Department of Indian and Northern Affairs, 1972: 10)

It can be seen that the major priorities are to promote native interests as well as to encourage economic growth.

However, the objectives of this department appear to represent more of an acculturation process of the natives towards southern standards as indicated in the stated policy in their "1976/1976 Annual Report":

Economic self-sufficiency for the Indian people is the Economic development Branch mission.... Greater participation in the labour force must be considered of highest priority. (Department of Indian Affairs and Northern Development, 1976: p. 33)

Similar objectives are also expressed in some of their reports. For example, the study of "Socio-economic implications of Eskimo employment in the Baffinland Iron Mines Project" (1970) describes its purpose to be the documentation of the socio-economic factors affecting employment of Eskimos in the Baffinland iron mines project. The report makes no attempt to discuss the social implications of Eskimo employment, but resembles more a handbook on how to recruit natives for employment, job training, and employment suitability for the mining project. The report concluded natives were suitable and could be recruited for employment in the mines.*

Another study conducted by the Department of Indian Affairs and Northern Development entitled "The Socio-Economic Impact of the Pointed Mountain Gas Field" (1973) also stressed

*The only reference to alcohol in the report is that mine authorities have "established rules regarding alcohol which apply to both non-indigenous and indigenous groups".

economic rather than social impacts of the development. Although only a few workers (n=21) were interviewed and asked 15 questions directed towards economic conditions, the report was able to conclude that social change caused by the project was not drastic. The study did mention that alcohol consumption had moderately increased and that there has also been a trend towards more store-bought liquor over home-brew. They attribute this situation to higher earnings and greater accessibility to alcohol via scheduled flights into the community. Although no data on crime rates were obtained, the study claims that the incidence of increased alcohol consumption or crime was not significant.

Some studies by the Department of Indian Affairs and Northern Development clearly emphasize the social impact of northern development. A report by Ervin (1968) entitled "New Northern Townsmen in Inuvik" illustrates this point. The paper discusses the problems of adaptation for the natives and their perceptions of their situation. The author describes negative feelings experienced by the natives toward the newcomers from the south, and the disintegrated sense of personal identity as a consequence of northern development. The study concludes that there are many problems related to acculturation which "include the economic, educational, job skill and housing lacks which affect the natives, and put them to such disadvantage vis-a-vis the white transients" (p. 21). The paper cites alcohol as the number one problem in Inuvik.

One of the best examinations of the processes which precede economic development in the north is a case study of the Strathcona Sound Mining Project conducted by Gibson (1978).* Gibson noted that the proposed project raised serious and complex social issues, yet no social impact study was conducted before the government granted approval and support for the project. The only study conducted was one of native labour availability.

The decision to conduct a social impact study (and an agreement along these lines) was made after the proposed mining project was approved. Furthermore, there is no indication that negative results of the impact study would lead to major revisions, let alone cancellation of the project.

The author points to the discrepancy of the federal and provincial (N.W.T.) governments' objectives of having native participation in the planning and management of the project and their deviation from these objectives in actual decision-making processes (Gibson, 1978:103). Furthermore, the writer claims that the government failed to provide adequate and understandable information about the project and implications to the communities concerned. Therefore, it appears that Strathcona will be at best a testing ground for social impact

*This study was conducted by a political scientist under contract with the Federal Department of Supply and Services.

assessment of inevitable northern development of non-renewable resources; however, the results of the assessment are not likely to have an impact on the project itself.

Recently two investigations sponsored by the federal government involve attempts to assess impact prior to approval of development. "The Report of the Mackenzie Valley Pipeline Inquiry" by Justice Thomas R. Berger devotes at least two chapters of the first volume to cultural and social impacts of the proposed pipeline. His conclusions are that the cultural and social consequences of pipeline construction are likely to be highly disruptive, especially of native communities and established northern towns. Alcoholism, crime and violence, disruption of native values and personal identity, and health problems are the main social issues related to development.*

The author recommends that the proposed pipeline across the Northern Yukon should not go ahead and the Mackenzie Valley pipeline should be postponed for ten years. The main reasons for these recommendations are environmental issues, the limited economic benefits, the expected negative social impact, and conflict with native land claims (Berger, 1977: xxvi-xxvii).

The "Alaska Highway Pipeline Inquiry" by Lysyk, Bohmer and Phelps (1977) presented its report a few months after the first volume of the Berger report was released. This

*For a summary of the material in Berger (1977) and Lysyk, Bohmer and Phelps (1977) on social consequences, especially alcohol problems, refer to Giesbrecht (1978: Appendix B).

report also contains a substantial section on the social impact of the proposed pipeline (e.g., Lysyk et al., 1977: chapter 7). Similarly, they also expect the social impact of the pipeline construction to be primarily negative (Lysyk, 1977: IX, 101-103). Alcohol problems, criminal activities, accidents and assaults, and disruption of family life are the main problems mentioned. The authors recommend that for these and other reasons the pipeline construction be postponed for several years, until the arrangements, facilities and information was available to properly assess and deal with the expected consequences.

The orientations, conclusions and recommendations of these reports suggest that social issues related to development have recently received special attention in government-sponsored inquiries. It is also of some significance that these rather large-scale investigations were conducted prior to approval of the proposed development.

In Ontario, the perspectives of the provincial government are divergent in different documents. One report entitled "Northwestern Ontario: A Strategy for Development" clearly has the mandate of promoting and facilitating economic development. The goals and objectives are explicitly stated:

To create at least 18,000 new jobs over the next two decades, encouraging economic expansion, especially in a system of growth centers. (McKeough, and Dick, 1978: 19)

Social issues in the report were primarily addressed from the

point of view of facilities presently available and required; and not in terms of the effect of economic activity on social conditions.

On the other hand, The Royal Commission on the Northern Environment devoted much of its attention to the negative social consequences of development. This concern is evident in their recommendations (Hartt, 1978) for greater participation and planning of northern residents for present and future developments. Statements in another Royal Commission document (Hartt, 1978) also reflect a need for greater northern and local input into planning as:

in the view of many northerners, government and private initiatives in northern Ontario have consistently reflected southern values. (Hartt, 1978: 151).

In fact, chapter 5 of their "Issues" series is mainly devoted to the social impacts of development: cultural concerns, alcoholism, discrimination and cultural effects of environmental pollution are all discussed in detail. The emphasis of the Royal Commission may reflect, at the governmental level, an increasing awareness of many social problems and potential social consequences of development.

B. Industry

Despite the complex network of governmental departments and agencies in the north, there is evidence that the main determinants of economic growth are decisions made by private

industry. These decisions are primarily made by those in industry who reside outside the region. Decisions are based on such concrete factors as the feasibility, size and location of the proposed project. Many of the decisions are even outside the realm of industry as non-renewable resources have such a dependence on world markets (Ontario Economic Council, 1975).

Practically all social or socio-economic impact studies conducted by industries have emphasized the economic rather than the social consequences of the proposed development. An example of such a study is a submission of Ontario Hydro to the Royal Commission on Electric Power Planning entitled "Socio-Economic Factors" (Submission of Ontario Hydro, 1977). The report is not a specific impact study, but describes the areas that socio-economic studies, or community impact studies should examine before, during and after completion of the project: employment, housing, population, economy, financial conditions, historical and archaeological significance, land use, and required services. The report proposes that these areas be examined to insure that there are adequate available resources to meet increased demands due to the new project. Although social changes were not mentioned in the body of the report, one of the final remarks was that future development in the community impact field ought to be concerned with social changes as a result of hydro facilities.

A private consultant study in British Columbia, "The Social and Economic Impacts of the Proposed Seven Mile Hydro-

"Electric Project" is another example of a report by industry focusing on physical factors and largely ignoring social factors of development (Crawford, Roberts, Wright, 1974). The study examines in great detail the requirements for housing, schools, health services, social welfare services, recreation facilities, policing, road traffic and employment opportunities. However, social problems which might be expected as a result of the project are not discussed. It is apparent that this report interprets social impact to mean increasing the facilities to accommodate inconveniences from a population growth. Alcohol is not mentioned.

The Foothills Pipe Line Ltd. (1975) document on the proposed pipeline through the Yukon and Alberta examines socio-economic impact in more detail than most studies. Two of fifteen sections are relevant to social impact, and in them alcohol, crime and health issues are mentioned. The authors take a passive approach in their discussion of alcohol abuse, citing historical problems of alcohol consumption and the relative helplessness of dealing with the situation:

Alcohol abuse has been a problem in the North since alcohol was first introduced in the 1800's and the problem has generally worsened. (Foothills Pipe Lines Ltd., 1975: 5C-3.12)

Elevated rates of violent and property crimes are noted and the relationship with alcohol consumption discussed.

In a large consultant report, for the Imperial Oil Cold Lake Project, prepared by Resources Management Consultants Ltd. (1978) at least two of the five major sections are relevant to the social impact of the project. These are the sections on "Government Programming" (No. 4) and "The Native People of the Study Region" (No. 5).*

The authors use a linear quantitative approach in assessing the socio-economic impact as they claim that future demands for services and facilities are expected to be directly proportional to projected population increases:

Some of these effects (increased demands on services) may persist into the operations phase but only to an extent consistent with the increased permanent regional population.
(Resources Management Consultants Ltd., 1978: 125)

For example, government programming with regard to education, medical services, social services, housing, and criminal justice are handled in this way.

With regard to their discussion of social problems, two important short-comings are evident. First of all, the negative social consequences of development are not addressed directly, but treated as logistical questions: what type and number of facilities or staff will be needed to meet the problems? Secondly, no allowances are made for the potentially

*The three other sections deal with population and population projections, employment opportunities and the regional economy.

unique impacts of the new-comers accompanying development. For example, projections of crime rates on the basis of expected crude population growth may be an under-estimation, especially if many of the new-comers are young, hard-drinking, males who may receive less than an enthusiastic welcome from local officials and residents. It should be noted that these criticisms also apply to a number of other social impact assessments using crude linear extrapolation techniques and dealing with social consequences by focusing on facilities.

The native people of the study region are considered to be the main group experiencing social consequences from the oil-extraction project. However, the overall assessment is that the impact will be positive. For example, the authors argue that because one half of the inmates (mainly Indians) in one correctional institution were incarcerated for default of fines jobs are needed to reduce poverty. And they claim that increased employment opportunities for natives will have a positive impact on alcohol abuse in this ethnic group.

(Resources Management Consultants Ltd., 1978: Section 5)

The authors downplay certain negative social consequences likely to accompany development. In our view, problems among natives in adjusting to the project and new work roles may in fact increase social disruption and crime rates. Furthermore, increased employment and income will likely make alcohol more accessible and thus contribute to a greater prevalence of alcohol problems, even among employed

natives.

The report by Gemini North Ltd. (1974) on the Arctic Gas Pipeline stands out from a number of other consultant studies. It emphasizes the problems of quantification in social impact studies, its approach is less mechanistic than most other work, and many of the conclusions are pessimistic.

Several key statements about assessing the impact of development are as follows:

1. The impact of development is almost impossible to quantify, or more simply, to express in number.
2. Impact development can both be visible and invisible.
3. The impact of development is often entirely unexpected and cannot be projected (an example cited is when housing units in Fort McPherson (1970) were constructed (there were unexpected drops in the fur trapping effort). (p. 534)

The study criticizes the linear qualitative model as characterized by their statement that:

Crimes of violence, alcohol abuse, child neglect and similar social disorders appear to increase out of proportion with the rate of population increase under the impact of development. (p. 533)

The report also provides the greatest in depth examination of alcohol of any of the consultant reports (30 pages). The discussion highlights four points:

1. It (alcohol) is ingrained in the northern life style;
2. It is worse in communities where development is taking place than in communities where it is not;
3. It is expected to become an even greater problem in the future if the proposed highway; pipeline and associated development takes place;
4. The mechanism for offsetting this anticipated increase, either through education, information or controlled use, appears to be totally inadequate. (p. 541)

(These points will be examined further in subsequent sections of this report).

C. Interest Groups

The ethnic and cultural compositions of the host communities affected by economic developments may vary, but in northern Canada, one group, the natives, most commonly represents the majority of the host communities' population. However, there are other interest groups which express concern with the impact of northern development. For example, environmentalists and ecologists object to development of the north because of pollution of the land and the cultural complications for the native people. Some interest groups originate from specific projects, such as the one objecting to the James Bay Development on grounds that the project was initiated for political purposes and will not be of use to Quebecers (Salisbury *et al.*, 1972).

This section will deal primarily with the social impact of northern development from the perspective of the natives.

Numerous books, reports, historical works and sociological studies have been written on the social and economic effects of industrialization on the natives. The volume of material is tremendous; only a few recent works which summarize the main findings and opinions will be discussed in this report.

The social impact of industrialization on natives is a key focus of Berger's (1977) inquiry into the MacKenzie Valley Pipeline Project. In a letter from Mr. Thomas R. Berger to the Minister of Indian Affairs and Northern Development, Mr. Allmand, Mr. Berger describes the probable social impact of the MacKenzie Valley Pipeline:

I am convinced that the native people of the North told the Inquiry of their innermost concerns and their deepest fears. Although they had been told -- and some had agreed -- that the proposed pipeline would offer them unprecedented opportunities for wage employment, the great majority of them expressed their fears of what a pipeline would bring: an influx of construction workers, more alcoholism, tearing of the social fabric, injury to the land, and the loss of their identity as a people. They said that wage employment on the pipeline would count for little or nothing when set against the social costs. I am persuaded that these fears are well founded.

The alarming rise in the incidence of alcoholism, crime, violence and welfare dependence in the North in the last decade is closely bound up with the rapid expansion of the industrial system with its intrusion into every part of the native people's lives. The process affects the close link between native people and their past, their own economy, their values and self-respect. The evidence is clear: the more the industrial frontier replaces the homeland in the North, the greater the incidence of social pathology will be. Superimposed on problems that already

exist in the MacKenzie Valley and the Western Arctic, the social consequences of the pipeline will not only be serious -- they will be devastating.

The social costs of building a pipeline now will be enormous, and no remedial programs are likely to ameliorate them. The expenditure of money, the hiring of social workers, doctors, nurses, even police -- these things will not begin to solve the problem. This will mean an advance of the industrial system to the frontier that will not be orderly and beneficial, but sudden, massive and overwhelming. (Berger, 1977: xxi-xxvii)

Studies which represent natives interests present similar findings. A paper by Spaulding (1967) depicts the natives as victims of white man's economic and industrial development in the north. The new economic conditions, coupled with the diminishing resources which sustained Indian life, has created a dependence of the natives on whites for subsistence. The growing dependence is not welcomed in many instances as the natives "remain uncommitted to the values of industry, sobriety, and chastity enshrined in the larger society" (p. 92). This study, like most, views the natives from the standpoint of an eroding culture due to white man's infiltration of the territory. The end product for the native is a clashing of values, loss of self-identity, which lead to frustration, resulting in aggressive, irresponsible, or apathetic behaviour (UNESCO, 1959).

It is interesting to note those values the natives claim are important to them sometime conflict with government assumptions. An example is found in a statement by Tagak Curley, who feels there is a conflict between native and

government values:

I cannot blame our people because they are not used to public forums. They do not know how to take advantage of the institutional structure to get what they want. We are not used to these kinds of things. We still see the old-fashioned Inuit way which is common sense. That's the way Inuit operate, common sense. If it's going to be harmful to natives, don't do it! But this is not what we've experienced. In a very difficult situation I could call it "the taming of the native people". Resource development in the name of progress is actually "taming the native people". By using lines like "We'll provide jobs, employment, training skills for native workers; it reminds me of taming a dog. You give him little bits of things and encourage him and sooner or later that poor old dog gets used to it. But you don't really tell people what they will be like someday. --- We just naturally get them used to the system that we want them to get used to. But we are part of native society, of Inuit society, where Inuit society has survived and is still in existence. (Tester, 1978: 249)

The former Chief of Grand Council Treaty #9, Andrew Rickard states the native people are not opposed to development as long as it is controlled socially, economically and ecologically (Rickard, 1977). In July 1977, Rickard revealed the declaration of independence of his nation call Nishnawbe-Aski (The People and the Land) establishing spiritual, cultural, social and economic sovereignty over 210,000 square miles of Northern Ontario (more than half the province).

Similarly the Dene had in 1974 proclaimed self-determination as a nation of Indians within Canada, stating their right to control their activities and development, as well as complementing and reinforcing traditional pursuits.

The Dene insists that:

...development be implemented in a way that fits the Indian way of doing things, (which is not the same as the government's way or the companies' way). (McCullum, McCullum, 1977: 47)

McCullum et al. (1977) suggest a moratorium on all major developments until land claims are settled. Their book centers around the conflict between multi-million dollar companies and the traditional way of life of the natives. The authors point to historical differences between the social and cultural values of northerners and the refusal of the government to recognize native rights has created feelings of frustration, rage, fear and hopelessness.

A divergent perspective on natives and development is offered by Harold Cardinal (1977). He is generally in favour of development but finds that government promises of special programs often have not been met, or natives largely excluded from planning of development in their communities or geographic areas. Furthermore, government findings or other support of native initiated projects is considered to be meager, with many strings attached, or reluctantly provided and accompanied by distrustful attitudes (Cardinal, 1977: Chapters V and VI).

D. Assumptions and Models

Dixon (1978) reviewed socio-economic documents relating to the Alaska oil pipeline and concluded that 5 basic approaches were used to make assumptions:

1. The use of assumptions which had already been developed by someone else.
2. A Historical approach, which extrapolates past conditions to the present.
3. The use of standard formulae derived from the best available data.
4. Imagination and logic.
5. An empirical approach (rarely used) which involves the collection of original data. (Dixon, 1978: 265)

The perspectives of the government, industry and the natives can be examined in terms of the assumptions they utilize in their reports. The assumptions and approaches used by each of the three main groups discussed above can be summarized as follows:

1. Government:

The federal government and to a lesser extent the provincial government made two major assumptions in their reports.

- a. The natives need to participate more in the labour force.
- b. The natives should participate more in the decision-making processes of the north.

The first assumption (a. above) is so ingrained that in one report a chapter was devoted to social adjustments with the natives' support of the project as a basic assumption:

This chapter is based on the assumption that the native people in the study area would generally be in agreement with the proposed pipeline development and would participate in the project. (p. 153, Environment - Social Committee, 1974)

However, this assumption has been claimed by some natives to be inaccurate, as many members of the indigenous population would rather continue their traditional lifestyle (see earlier quote by Tagak Culey (Tester, 1978: 249). The second assumption has rarely been refuted by any group.

The federal and provincial governments appear to be sympathetic to the natives and the social well being of the northern people as studied in their priorities and objectives regarding expansion in the north. However, when specific actions are required to accommodate proposed development projects the government's concerns appear to be translated into a hasty recruitment program in order to assimilate natives into the work force. The government's incentive programs for native employment, and in the past their ready acceptance of proposed projects, indicate that they feel economic expansion and assimilation is in the natives best interests.

2. Industry:

The industries often used an approach which utilized (almost universally) a linear quantitative approach (Management Resources Consultants Ltd., 1978; Mary Collins Consultants Ltd., 1977). This approach can be very useful when dealing with economic requirements for a development such as the number of employees required, food supplies and equipment; but for social issues the linear model appears to be inadequate.

Gemini North Ltd. (1974: 533) conclude that social disorders appear to increase at a rate greater than what would be expected by normal population increases. Note also Dixon's statement on this topic:

The current model used for predicting social impacts is based upon two assumptions that the Fairbanks experience has not validated. First, it assumes that impact is a linear, quantitative function of the existing situation. Second, it assumes that communities are passive recipients of change. These two underlying assumptions must be reconsidered in light of the Fairbanks experience. (Dixon, 1978: 265)

In Fairbanks, social problems such as crime and illness increased out of proportion to population increases. The linear model does not examine enough variables, such as local community decision affecting the quality of life, or the effects of a rapid influx of persons on the social cohesion of a community. Nor does it take into account variation of impact depending on the age profile or other demographic characteristics of the newcomer group.

The industries rarely questioned the governments' assumption that the natives should participate in the labour force. Customarily the industries implement regulations and policies encouraging the participation of natives in the labour force (Mary Collins Consultants Ltd., 1977; Resources Management Consultants, 1978).

Consultant reports for industry often rely on common sense in drawing their conclusions. Statements such as

developments are needed to provide jobs and reduce poverty among natives is an example of such an approach.

3. The Natives:

Unlike the emphasis of studies conducted by the government or industry, the negative social impact of industrial development is emphasized by native interest groups. Loss of independence, social identity, conflicting lifestyles and introduction of alcohol are priority areas for studies which focus on the impact of development on the natives.

The issues and arguments of the natives often are in direct conflict with economic development; for example, the natives have often expressed a desire for independence, yet economic development often encourages a dependence of northerners upon the southerners, or natives upon companies having control over single-industry communities.

Currently a historical perspective stressing traditional values and lifestyles, and related to native land claims is a major countervailing force against economic development. The largest single organization for native land claims is the Indian Brotherhood of the Northwest Territories, which consists of numerous tribes, the Dogribs, Chipewyans, Slaveys, etc., who have formed a united front towards a settlement of land claims. Numerous other native land claim organizations have emerged (C.O.P.E., the Council for Yukon Indians, and the Yukon Native Brotherhood) and most organizations oppose

economic development until these land claims are settled. Their claim to the land is historical and the conflict between southern and northern values is often cited as a reason for seeking autonomy.

Two main views have developed with different conclusions. The industries and government claim the economic development will be beneficial to the natives in terms of employment (directly and indirectly through support services). On the other hand, the natives complain of undue stress and conflict created by different cultures, values and lifestyles. Social problems (alcohol, crime, mental stress) are highlighted by the natives and minimized by companies.

E. Summary

The different perspectives of the groups (government, industry, and the natives) and the types of approaches and assumptions each group utilizes becomes confusing. Some of the variability in the approaches used may be attributed to the wide range and definitions surrounding the issue of social indicators. The development of models to describe social processes is in its infancy and as a consequence many have utilized their own approach to solving these problems. The government has mixed social impact with its public relations effort, the industries have adopted a linear model of social impact to suit their needs, and the natives have cited historical conditions and individual impressionistic

sources to make their claims for greater autonomy.

Unfortunately, workers in all these groups have largely ignored systematic empirical research as a means of assessing social problems related to development. It is the exception rather than the rule that official statistics on crime, illness or other social problems are presented in impact studies.

Salisbury (1978: 14) describes the minimal impact the social sciences have had in the area of socio-economic impact studies. He notes and generally agrees with Berger's statement that "social impact assessment is often merely window-dressing for decisions already made and only serves to discuss remedial measures for local negative impacts". But Berger is subject to the same criticism, according to Salisbury. Though hard data were available to Berger, he chose to be subject to the same miscomings; graphic testimony was cited rather than analysis of social data.

III WHY FOCUS ON ALCOHOL?

It is clear from the work summarized above that there are many topics related to economic development which might be examined. Even the range of issues typically identified as "social problems" is considerable: including problems involving adolescence (e.g., juvenile delinquency), family roles (e.g., divorce or child neglect), work roles (e.g., unemployment, transient), public order (e.g., property and violent crimes), and public health (e.g., accidents, heavy drinking, hazardous work conditions). Furthermore, the behaviour or situation identified as problematic often cuts across many social spheres and roles, and at certain high levels of severity may be widely disruptive of conventional social functioning. In this regard serious criminal activity, mental disorders, or heavy consumption of alcohol or other drugs are examples of "social problems" that can be highly disruptive of individual life-styles and broader social roles.

It would take us too far afield to explore the definitions of "alcohol-related" problems. Also, it is beyond the scope of this paper to address issues such as: Are alcohol problems 'symptoms', 'causes', or both? Which 'alcohol-related' problems are caused by drinking, which are concomitants, and which are merely coincidental? Furthermore, we do not tackle debates about the relative influences of environment (e.g., availability, heavy drinking traditions) versus biological (e.g., the 'disease' concept of alcoholism, genetic

factors) in the development of heavy drinking and alcohol problems. For example, it might be argued that the main reasons for elevated alcohol consumption rates in northern areas is that persons genetically predisposed to alcoholism are attracted to these areas. However, in our view this type of argument is rather far-fetched and overlooks more reasonable explanations.

The main focus of the remainder of this paper is on the "social problem" aspects of alcohol use. Alcohol might also have been considered from an economic perspective: for example, its role in stimulating local businesses such as licensed premises or entertainment, as a source of taxation, as a component of police or health costs, or as a factor in absentee rates, work-force turnover, and thus protraction of construction timetables. The social benefits of alcohol use might also have been considered: as a 'lubricant' among strangers meeting in a strange place, as a symbol of solidarity and good will among persons who spend long hours working and living together, as a facilitation of 'time-out' from an often long and grueling work schedule. These are important topics, and, for full-some perspective of the role of alcohol in development, need to be addressed. However, time constraints, the scarcity of relevant literature, and a concern with keeping the results of an explanatory study of manageable proportions were the main reasons for not broadening our study to include economic issues and positive social benefits of alcohol.

There are several reasons why 'alcohol' is an important

topic in relation to development and social impact studies. This is not to say that it has been given the attention we think is warranted.

A. Logical

It is reasonable to expect that development will substantially increase the availability of alcohol areas where it was formerly scarce.

1. The creation of new or more efficient transportation systems, which invariably accompany major development projects, facilitate the shipment of liquor to these sites.
2. Because of high wages, frequent overtime pay, and free room and board, many of the new residents receive large net incomes in settings with little to spend it on. Furthermore, because alcoholic beverages sold in isolated settings may not be subject to the same markups as essentials such as food, clothing and fuel, the attractiveness of alcohol as a consumer commodity is increased.
3. A rapid influx of mainly young to middle-aged males may result in unique pressures on companies, unions and government to provide liquor outlets. However, the number and type of outlets may not be in keeping with the size of the community nor the sentiment of longer-term community members. There may be more liquor outlets per capita than one is likely to find in communities not undergoing economic development. The type of

outlets and typical behaviour in some of them may be out of step with mores usually found in smaller towns.

4. Drinking outlets are often the only legitimate source of public entertainment in communities experiencing the impact of development. Gambling or prostitution may be common but are usually illegal. Liquor outlets are relatively inexpensive to set up, do not require a large staff or high degree of skill to operate, and are well patronized. For other sources of entertainment or leisure - such as libraries, live theatre, or musical groups - it may be more difficult to find suitable personnel, obtain financing or find patrons.

These four reasons lead one to expect an increase on alcohol consumption in areas or communities undergoing economic development. Furthermore, this increase is likely to exceed the growth of the population. In other words, the changes in alcohol consumption accompanying development are not likely to be "explained away" by referring to an influx of newcomers.

There is a large and growing body of literature linking rates of alcohol consumption to rates of alcohol-related problems. The links with health problems are more common than with public order problems, and the rate of liver cirrhosis is often used as a key indicator of alcohol-related damage*.

*For overviews of this literature refer to Bruun et al., 1975; Popham, Schmidt and de Lint, 1978; and Giesbrecht, 1978: Appendix A.

Similar relationships can be expected in northern settings undergoing rapid economic development. However, it should be noted that since the age of the population in 'development' communities is likely to be younger, a substantial proportion short-term residents, and weekend spree type drinking may be common, there may be an atypical preponderance of acute problems. Specifically, elevated rates for accidents or violence related to alcohol, or acute intoxication may be more common than in urbanized or rural areas not experiencing major development (e.g., Giesbrecht, et al., 1977: 167-170).

There are at least two unique reasons to expect that the higher consumption rates that one is likely to find in relation to economic development, will, in these settings, result in higher than usual rates for alcohol-related problems.

1. In development occurring in isolated settings one is likely to find few of the social controls and/or services for heavy drinking found in more urbanized and established communities.
2. Problems that do arise will have a decisive impact on the host community. This community is invariably small, and probably including many natives. In either case there will be difficulties in coping with heavy drinking by newcomers to the community, particularly when these new comers are representative of 'new' money and employment being brought to the area.

B. Historical and Empirical

Numerous accounts by missionaries, explorers and travellers, and more recently, by historians and anthropologists, have linked heavy drinking and alcohol-related problems with opening up of Canadian frontier areas by Europeans. For example, this theme is evident in the work by Kelbert and Hale (1963) and Dailey (1967) on the history of drinking among the natives of northern Ontario*. During the 17th century alcohol became an important item of trade and barter. Once introduced to native Indians, many among them considered it valiant to be drunk, and violent emotions and displays of aggressive behaviour were often tolerated. According to Daily (1967) intoxication was valued because it was akin to the experiencing of dream-states which were highly valued in Indian culture. However the results of heavy drinking often included disruption of economic base or social life of a native community, or frequent injury or death.

Comments about the disruptive role of alcohol when introduced into formerly isolated communities are also evident in recent work sponsored by the Federal and the Ontario provincial governments. The pipeline inquiry reports by Berger (1977) and Lysyk *et al.*, (1977) appear to place special emphasis on the potentially disruptive role of alcohol in relation to development. The authors of these reports

*For a summary of some of this work refer to Giesbrecht *et al.*, (1977:217-219).

have paid particular attention to the impact of alcohol on the natives living in northern Canada, and the difficulties likely to arise when formerly isolated communities suddenly become the subjects of non-traditional influences. Similarly, the initial reports of the Royal Commission on the Northern Environment (1978) (Hartt, 1978) suggest that alcohol consumption and related problems are special problems in northern areas, especially in native communities experiencing development (e.g., Royal Commission on the Northern Environment, 1978: 176).

C. Methodological

As we indicated earlier, alcohol-related problems commonly involve many social roles and thus are potentially disruptive of a wide range of personal and interpersonal activities. Furthermore, alcohol problems are not restricted to persons of a particular age-group, sex, race or socio-economic status. And heavy drinking may be caused by a variety of factors as well as 'symptomatic' of various 'underlying' problems. Other reasons for focusing on alcohol are that the prevalence of alcohol problems may be a useful barometer of the degree of stability of the community, the degree to which rapid social change has been accommodated, and/or the negative social consequences of development.

It must be emphasized that these assumption has not been explored. Furthermore, they may be applicable to communities within a certain population range and not for others, or under certain conditions - e.g., depending on the relative size of certain conditions - e.g., the host community and the incoming population.

D. Summary

There are several reasons why alcohol problems should be considered in socio-economic impact studies of development. The availability of alcohol is likely to increase in conjunction with development, and often in situations where conventional controls on drinking or appropriate intervention facilities may be absent or weak. Many of the workers involved in development projects may be inclined to heavy drinking. Furthermore, both historical accounts and recent inquiries indicate that alcohol problems are likely to be more prevalent during phases of rapid economic development. Finally, since heavy drinking and the social problems likely to arise from it cut across many socio-economic boundaries and involving many spheres of social life, the prevalence of alcohol problems may be one useful indicator of a community's adaptation to development.

IV. ALCOHOL CONSUMPTION

A. Introduction

In the next three sections the relationships between rapid economic development in isolated areas and alcohol problems are considered. Various sources of information are used in exploring this topic, including official statistics, accounts or impressions presented in documents prepared for industry, government or academic readership, popular accounts in magazines, or newspapers. The material is organized into under three topics: alcohol consumption, alcohol-related problems and alcohol control measures*. A fair assessment of the information we were able to assemble is that there are numerous impressions, but that the presentation of systematic data is the exception rather than the rule.

*The organization of sections IV, V, and VI has been influenced by the ongoing participation of one of the authors (NG) in the project entitled the International Study of Alcohol Control Experiences.

B. Levels and Trends

There is evidence that the northerly areas of Canada (where the proportion of people involved in development is considerable) are likely to have higher than average alcohol consumption rates. Table I indicates that between 1968-69 and 1975-76 the Yukon had the highest and the Northwest Territories had the second highest rates per adult (aged 15 and older). More recent figures indicate that there has been a decline in the rate for the Northwest Territories - from a high of 3.92 gallons per adult in 1972-73 to 3.22 in 1975-76. However, the annual rate for the Yukon, already at 4.39 gallons in 1968-69 continued to increase, reaching 4.76 gallons in 1973-74 and declining over the next two years. The percentage change for the Northwest Territories has been among the highest in Canada between 1968-69 and 1975-76.

Some of these figures might be placed into perspective by translating them into the equivalent of bottles of beer per adult per week. For example, consider an annual rate of 4.39 gallons of absolute alcohol: this equals 95 gallons of beer or 24.5 bottles per week or about 3.5 per day. In terms of whiskey this would amount to about 1.4 bottles (26 oz.) per week.

TABLE 1

PER CAPITA CONSUMPTION (GALLONS OF ABSOLUTE ALCOHOL) IN CANADA BY PROVINCE

FISCAL YEARS 1968-69 TO 1975-76

Jurisdiction	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	Percentage Change
Canada	1.90	1.97	2.06	2.23	2.33	2.44	2.45	2.47	+30.0
N.Fld	1.21	1.28	1.40	1.65	1.92	2.31	2.30	2.33	+92.6
P.E.I.	1.51	1.57	1.67	2.00	1.89	2.18	2.21	2.28	+51.0
N.S.	1.66	1.64	1.78	1.93	2.06	2.18	2.20	2.10	+26.5
N.B.	1.60	1.37	1.49	1.64	1.78	1.89	1.97	2.07	+29.4
Que.	1.63	1.81	1.90	2.04	2.15	2.25	2.26	2.32	+42.3
Ont.	2.13	2.11	2.19	2.38	2.43	2.55	2.52	2.51	+17.8
Man.	1.86	1.95	2.09	2.23	2.36	2.45	2.50	2.52	+35.5
Sask.	1.67	1.67	1.74	1.92	2.07	2.14	2.29	2.21	+32.3
Alta.	2.03	2.15	2.18	2.39	2.53	2.48	2.60	2.67	+31.5
B.C.	2.20	2.36	2.47	2.65	2.72	2.89	2.86	2.90	+31.8
Yukon	4.39	4.92	4.77	4.32	4.55	4.76	4.65	4.04	- 8.0
N.W.T.	2.26	2.57	2.93	3.28	3.92	3.86	3.39	3.27	+44.7

Table adapted from: Research Bureau, Non-Medical Use of Drugs Directorate, "Alcohol Problems in Canada: a summary of current knowledge". (Technical Report Series, No. 2, May, 1976, Health and Welfare, Canada). Table D-2, p. 14.

Based on population aged 15 and over.

Source: Statistics Canada, The Control and sale of alcoholic beverages in Canada, Catalogue 63-202, 1966-1973. For the years 1974-75, 75-76 - Addiction Research Foundation. Statistical Supplement to the Annual Report 1977-78.

These figures may or may not seem high, depending on one's perspective and drinking behaviour. However, it should be kept in mind that they are averages based on population in which abstainers and very moderate drinkers are included in the tabulations. Therefore it is of some importance that these adult population averages are actually above the lower dangerous threshold level of 20-30 per week indicated through clinical and epidemiological research (Addiction Research Foundation, 1978: 12).

While these statistics are only an indirect indication of a positive relationship between development and the level of alcohol consumption, they are in keeping with a number of impressionistic accounts. Justice Thomas Berger notes that although alcohol consumption in the north began to increase in the 1960s when interdiction against natives was lifted, the rate only moved ahead of the Canadian average in the late 1960s during the period of highway construction, and oil and gas exploration. The author illustrates this observation by noting that in Pond Inlet there was almost a 14-fold increase in the consumption rate over two years - a change which occurred during the recruitment of labour and increase in cash income of Panartic Oil employees (1972-1974) (Berger; 1977: 154).

Others, such as Hobart (1978), have also seen a

link between, on the one hand, the high consumption rate and steep increase in the rate, and economic development on the other. He notes that the rate of increase for the territories was much greater than that for Canada as a whole. Some of the increase in consumption is attributed to the oil boom:

The impact of the oil exploration boom is apparent since per capita consumption in the Northwest Territories is now higher than in the south (Hobart, 1978: 275).

Hobart sees increased availability to alcohol and the transition to a cash economy for the natives as major components of the trend toward greater alcohol consumption. He suggests that the high per capita rate of alcohol consumption is due to the "adverse effects of rapid development".

In a similar vein, participants in the MacKenzie Valley Pipeline Inquiry noted that alcohol appeared to be the only commodity that was subsidized by the Territorial government so as to ensure that price was the same throughout the Northwest Territories. This was considered by Berger (1977: 155) as "one of the factors contributing to the misuse of alcohol in the Northwest Territories".

In light of these aggregate statistics and impressions from the northern territories of Canada, it is

not surprising to find that the rates of alcohol consumption in northern Ontario are above the provincial average (Giesbrecht *et al.*, 1977: 34-57; see also Single and Giesbrecht, 1978). Information for a six year period (1969-1975) indicates that all three northwestern districts (Kenora, Rainy River, Thunder Bay) had rates above the provincial level. Kenora and Thunder Bay had the higher rates, and the latter a somewhat steeper increase in the rate.

A preliminary examination of certain demographic characteristics - age profiles, proportion males, percentage of native Indians - suggested that no one of them was adequate as a general explanation of the trends. The authors hypothesize that the number of liquor outlets per capita, and the drinking styles and the presence of "frontier" attitudes" - e.g., high risk physical work and "manly" drinking, may be relevant to the high rates of consumption (Giesbrecht *et al.*, 1977: 153-167).

*Cutler and Storm (1973: 122-123) suggest that a "frontier style" of drinking may become a typical style within a local area as the newcomers take on the habits of the heavier consumers of the host community, or begin to drink more heavily when they move to a northern town. Refer also to the discussion in Storm and Cutler (1975).

The findings from aggregate statistics provide some support, although not proof, that rapid economic development is usually accompanied by substantial increases in per capita consumption. To our knowledge, to date no Canadian longitudinal study has been reported in which levels and trends in alcohol consumption of 'rapid economic development and 'stable' communities are compared.

A report by Wong (1975) is a noteworthy beginning: he rank orders a number of communities of the Northwest Territories according to the per capita rates of expenditures of alcoholic beverages. In 1974-75 the ranks from highest to lowest were: Frobisher Bay, Fort Simpson, Inivik, Yellowknife, Hay River, Fort Smith, Pine Point, and Norman Wells. His work suggests that the communities at the forefront of development had the higher rate of expenditures on alcohol.

This type of research is complicated by the nature of the population and type of data required. Considering that the proportion of transient or migrant persons is likely greater in northern areas, the population data may be inaccurate. Where the population is relatively low, failure to obtain accurate counts from isolated settlements will be of some importance. Furthermore if the relative proportion of tourists or other visitors from outside the region is high, this will further complicate the tabulation of alcohol consumption rates.

However, there may be some cancellation of potential sources of bias: many of the visitors to the isolated regions may bring a fair supply of liquor - neither they nor their 'take-in' refreshments will be counted in official consumption statistics (see estimates by Wong, 1975, for the Northwest Territories).

Socio-economic studies of proposed or existing 'development' projects make reference to alcohol consumption, but typically present impressions rather than data. While some reports note that economic development will likely increase consumption rates, the adverse effects are down-played.

For example, the report by Foothills Pipelines Ltd. (1975: 5c-3.12) states that increased incomes will facilitate payment for goods including alcohol. However a few sentences later this statement appears to be nullified by the claim that the increased standard of living will permit expanded recreational pursuits, and thus serve to reduce alcohol abuse.

The report for Imperial Oil on the Cold Lake Project (Resources Management Consultants Ltd., 1978) also seeks to minimize the longterm impact of development on alcohol consumption rates. The authors indicate that one of the effects of development will be to increase alcohol consumption, especially among natives:

One of the initial consequences of employment of substantial numbers of native origins people on a development project will be to increase the consumption of alcohol, and no doubt the associated deviance behaviour, somewhat (Resources Management Consultants Ltd., 1978: 318).

However, citing Hobart (1978), they claim that there is good reason to expect the increase to be a temporary surge. Furthermore, they claim that employment tends to reward those natives not drinking and reject those who are drinking and whose work will suffer. Consequently, it is assumed that drinking among natives will subside because they will not wish to jeopardize their jobs. The authors of this study have mainly identified heavy drinking with natives and apparently do not recognize the possibility of workers drinking large quantities while off work and still being capable of working satisfactorily.

Another study while noting that prosperity has led to "some very tragic incidents associated with liquor misuse", notes that the responsibility of the company is limited (Mary Collins Consultants Ltd., 1977: 75).

C. Drinking Styles and Patterns

There appear to be several features of northern drinking which distinguish it from drinking in southerly regions. These features are not fully congruent. (1) Cheap beverages are more widely consumed, especially low-priced domestic fortified wine. (2) The proportion of alcohol consumed in the form of spirits is greater and the range of beverages consumed is less. (3) And there appears to be greater emphasis on drinking for the sake of drunkenness rather than for more "sociable" reasons, to enjoy the taste of liquor, or as a complement to mealtime. Consequently, drinking may commonly involve large amounts consumed at one occasion, rather than small amounts consumed frequently.

While not all of these features are clearly related to development, they are likely to be common where development takes place in the north. Evidence in support of these assertions varies from aggregate sales statistics to impressionistic accounts; and the main reasons for these features of northern drinking have not been identified.

1. Consumption of Low-Priced Domestic Fortified Wine:

These beverages have often been linked to Skid Row inebriates and also to street drunks of northern native communities (e.g., Yawney, 1967). Considering the high proportion of natives in the Kenora District (about 21% were registered natives in 1971), it is therefore not surprising

that in 1974-75 5.8% of the alcohol sold was for domestic Sherry in the two lowest price categories, compared to 1.7% for Ontario* generally (Giesbrecht *et al.*, 1977: 305). Similar beverage preferences are likely to be evident in other northern areas of Canada where the size of the native population is substantial.

In both Manitoba and Ontario efforts to control heavy consumption have included the delisting of domestic fortified wines. The Ontario effort initiated in December, 1975, was a local one involving 10 outlets primarily in the District of Kenora (Kenora Miner and News, December 10, 1975), whereas the Manitoba delisting was province-wide.

It should be noted that some years ago domestic fortified wines were by far the least expensive alcoholic beverages per volume of absolute alcohol. This was clearly evident in Ontario data (Giesbrecht, 1974) and was likely the case in other jurisdictions of Canada as well. However, since the late 1960s the Ontario prices have increased rather sharply and by 1975 were comparable to those of domestic beer. At that time a litre of absolute alcohol in the form of domestic fortified wine cost \$12.03 and domestic beer \$12.18, whereas domestic table wine (\$17.71), LCBO Alcohol (\$17.60), and Canadian Whiskey (\$22.53) was considerably more expensive (Giesbrecht, 1978b). Considering that there has been a

*The Ontario proportion is in fact inflated since it includes all domestic sherries.

narrowing of the difference between the often called "cheap drunk" beverage and the lowest priced brands of other beverage categories; it is no surprize that both in northern Ontario and Ontario generally, low-priced domestic fortified wines have been losing ground, especially since 1971-72 (Giesbrecht et al., 1977: 305). In other words their proportion of the alcohol sold has declined.

2. Preference and Range of Beverages

Hard liquor has been reported as the preferred drink in isolated communities of the north. Clairmont (1963) claims that preferences among Aklavik natives, ranked in order, is for whiskey, rum, beer, home-brew, perfume, and wood alcohol. Gemini North Ltd. (1974) presents figures which show that consumption of hard liquor is 36% higher in the Northwest Territories than Canada and that consumption of beer is 24% lower.

There may be various reasons for these orientations, including ease of transportation per volume unit of absolute alcohol, higher and quicker intoxication per volume of beverage consumed, and in some places cost. The difference in preferences reported by Gemini North Ltd. were attributed primarily to the fact that the price of spirits per absolute volume of alcohol was cheaper in the Northwest Territories than in southern locations: in the Northwest Territories the prices of spirits and beer were 68¢ and 65¢, respectively, in Edmonton the comparable prices were 55¢ (spirits)

and 42\$ (beer).

In northern Ontario, where liquor prices do not differ from those of southern locales, there is nevertheless a greater preference for spirits, particularly domestic spirits. Of the spirits and wine sold in Kenora District in recent years, Canadian Whiskey, and to a lesser extent domestic rum, have greater shares of the market than is the case for Ontario generally. Imported beverages are more popular in Ontario as a whole than they are in the District of Kenora*.

These impressions do not confirm that there is in fact a greater orientation toward spirits and a smaller range of beverages consumed in specific communities undergoing rapid economic development. However, they lead one to expect that more systematic research along these lines focusing on 'development' communities would support these impressions.

3. Drinking Styles

Most of the information on drinking patterns in northern communities is impressionistic. There are indications that not only is the overall consumption higher, but that there may be more liquor consumed per drinking settings. Furthermore, reports of drinking until the supply is gone, that is

*Based on data tabulated for the ARF research project entitled "Alcohol Problems in Northwestern Ontario", N. Giesbrecht, principal investigator.

until the bottles are empty, as well as binge drinking suggest this behaviour may be more common in northern areas, than elsewhere. However it must emphasized that systematic data on these topics is difficult to obtain.

In many reports the focus is on heavy drinking by native Indians. They have been, and often still are, perceived as the stereo-typical 'heavy drinker' in the north. Historical accounts of the opening up of what later became the Canadian west have noted the importance of whiskey in trade and government revenue. James Gray (1974) states: "whiskey was the force which impelled the American fur traders into the Canadian west and it was the liquid Lorelei that lured the Indians to the trading posts and their own destruction" (p. 1). Whiskey apparently became a key tool for manipulating the cooperation and needs of Indians so as to accomodate the intentions of traders. Furthermore, it was also an important source of revenue once governments were established in frontier areas:

The needs of all governments for ever-expanding sources of revenue accelerated the drive towards making booze totally available to social drinkers, problem drinkers and hopeless alcoholics alike, regardless of the social consequences (Gray, 1974: 206).

Some of the consequences of this situation have

been frequently described. For example, Jenness (1977) in his recent book* on the Indians of Canada states:

Whiskey and brandy destroyed the self-respect of the Indians, weakened every family and tribe tie, and made them willing or unwilling, the slaves of the trading-posts where liquor was dispensed to them by the keg. Even the fur traders recognized its evils and gladly supported the government when it finally prohibited all sale to the Indians under penalty of a heavy fine. Disease and alcohol demoralized the Indians just when they needed all their energy and courage to cope with the new conditions that suddenly came into existence around them (Jenness, 1977: 25).

There are interesting resemblances between drinking styles among natives appearing in historical accounts of the 18th century and earlier, and more recent accounts. Kelbert and Hale (1965) note that in the 1800s the natives appeared to drink larger quantities of alcohol in a time span than the Europeans:

It is abundantly clear from the report that the Iroquois began to drink in excess, judged by European standards" (p. 1).

Drinking was not for "sociable" reasons (as we know it) or to enjoy the taste of liquor. The Iroquois drank to feel the full effects of intoxication -- using alcohol as a drug and interested in its anaesthetic and euphoric properties. They became intoxicated deliberately and often announced beforehand that they were going to get drunk (p. 25).

*(ed. note: Jenness' book was first published in 1932.)

Clairmont (1963) arrived at similar conclusions in recent sociological study of deviance among Indians and Eskimos in Aklavik, Northwest Territories.

Young natives engage in "binges" whenever they have lots of money, quit their jobs, or receive their pay (p. 56).

In both groups (male and female) persons boast of how much liquor they have consumed, and of the duration of their binges (p. 60).

Another recent study concluded:

It is certainly clear that drinking is done for an explicit purpose, to reach a state of euphoria (Ervin, 1968: 17).

Aside from the style of drinking large quantities in short periods, other observations of native drinking are that solitary drinking is rare, with group drinking being the norm. Also the younger male natives are most likely to engage in heavy drinking (Clairmont, 1968).

Thus impressionistic data generally support the claim that drinking among natives is more binge related, for the purpose of getting drunk, rather than being used primarily for purposes of enjoying the taste and its mild effects.

To what extent native drinking styles and those of other northerners have reinforced or are modeled after each other has not been clearly determined. However there are some noteworthy parallels between the reported heavier drinking styles among natives and the styles of alcohol consumption in isolated 'development' communities. Hawthorn notes this parallel in Indians of British Columbia:

Many of the drinking patterns of native people are identical with those of the whites of rural areas, many of them seasonal workers, single men, loggers and fishermen who come into town every so often to spend money freely and noisily. Theirs is perhaps the dominant cultural influence in rural, including Indian, drinking patterns today (Hawthorn, 1960: 380).

A mental health survey in the Northwest Territories (MacKinnon and Newfeld, 1973) came to the conclusion that the problem of alcohol abuse is not exclusive to natives, as white respondents reported excessive drinking to the same extent as natives. Gemini North Ltd. (1974) suggest that historically the whites who provided a role model for the natives were a heavy drinking lot. Binge drinking is a characteristic of fur traders and miners of the north.

D. Summary

The northern areas of Canada have higher rates of alcohol consumption, and in some jurisdictions the increase in the rate of consumption has been linked to development. Some investigators have pointed to the availability of alcohol particularly through the initiation of cash economies in native communities, or the subsidization of liquor "Frontier" attitudes toward drinking appear to be common in northern communities and are evident in account about drinking styles and beverages preferences. Consumption of spirits appears to be more common than in southern locales and the range of beverages consumed is apparently not as wide as is generally the case. There are reports that larger amounts are consumed per drinking occasion, and that fewer occasions involve drinking as a supplement to other social activities. In some northern locales, especially in native communities there has in the past been a strong preference for low-priced domestic sherry.

Although natives are often presented as the stereotypical heavy drinker of the north, this may in part be a reflection of patterns developed from modeling the drinking of non-natives in northern communities. While there are a number of factors contributing to higher overall consumption in northern areas, there are few studies which examine the relationship between development and alcohol consumption levels.

V. ALCOHOL PROBLEMS

A. Introduction

Alcohol problems are considered to be more prevalent in northern areas of Canada (e.g., Giesbrecht *et al.*, 1977:58-150) and a number of accounts suggest that the prevalence of problems is related to rapid economic development. In this section we examine material on the type and levels of problems usually linked to economic development. These include incidents of physical abuse and violence, crime in general and various public health problems. Alcohol problems in northern areas have also been linked to family disruption. Reports from the Northwest Territories, Yukon, northwestern Ontario, as well as from Alaska, provide an overview of these topics.

B. Crime, Violence and Accidents

Many authors (e.g., Berger, 1977; Hobart, 1978) have hypothesized a relationship between alcohol and crime. Hobart (1978) examined the relationship between economic development, liquor consumption and offence rates in the Northwest territories. The results indicate the offence rates in the Northwest territories and the Yukon have been consistently higher than the rest of Canada and the incidence of crime increased more rapidly in the north than the rest of Canada. Hobart interprets the findings:

The data certainly reflect the problems resulting from rapid recent movements into settlements, availability of employment, and a host of other changes (p. 275).

And: The data appear to show that the impact of development has been accompanied by substantial increases in commission of offences (p. 276).

Hobart's more detailed analysis focusing on communities show a variation in patterns between communities; with the major distinguishing determinant being size of the community. The larger and more heavily impacted areas, such as Fort Simpson and Inuvik, show the greatest correlation between rapid development, liquor sales and crime; while in smaller satellite communities, such as Fort Norman and the Delta, offence rates and liquor consumption has not increased substantially. A third category of communities, namely Aklavik and Fort McPherson, have shown an onset of increased liquor consumption and crime rates with development for a period of about four years following a boom, but these adverse effects have subsided since that time. It appears from this study that social impacts particularly those evident in crime rates could stabilize once the period of rapid social change has passed.

The "Report on Health Conditions in the Northwest Territories - 1971", presented by Finkler (1976) estimates that the association between alcohol consumption and deaths from accidents, injuries and violence is in the neighbourhood of 40 to 50 percent. Finkler's analysis of offence data for 1972 in Frobisher Bay that alcohol was a factor

in 75.1% of the total offences, with 47.2% of the violations of the Liquor Ordinance Act. He also found that alcohol was associated with 80.9 of the offences by Eskimos, as compared to only 35.7 of the offences by non-Eskimos. In addition to the above evidence, Finkler examines some case studies to demonstrate the relationship between alcohol and assaultive behaviour and thefts.

Socio-Economic reports have made reference to crime, usually in an attempt to project required facilities to meet increased demands. A report by Foothills Pipelines Ltd. (1975) suggest the high rate of violent crimes and property offences are likely linked with alcohol, and claims that the success of recent liquor rationing and prohibition in reducing rates implicate such a relationship. Crimes of violence in the Foothills region have increased from 2 per 100 population in 1967 to 4 per 100 population in 1972, as compared with a Canadian average of 0.4 per 100 population. Liquor Ordinance Violations, according to law enforcement agencies probably account for 50% of all crime in the study region. The more densely populated rates of Liquor Ordinance Violations: 27 per 100 population for Fort Simpson, 24 per 100 population for Survile, and 21 per 100 population for Fort McPherson, as compared with 19 per 100 population for the entire study region. Although the authors recognized the problems, no remedial efforts were suggested except "to ensure that adequate level of law enforcement is available in the time frame required" (Foothills Pipe Line Ltd., 1975: Sc - 3(14)).

In their assessment of the proposed Artic Gas Pipeline, Gemini North Ltd. claim that alcohol consumption is associated with 40 to 50 percent of the deaths from injuries, accidents, and violence in the Northwest Territories. They further note that 90 percent of all ordinance violations involve the Liquor Ordinance.

Most of the socio-economic studies examined criminal statistics in some form. However, the majority of industry and consultant reports hedged away from making assertions of the relationship between crime and economic development, except for what would be expected by comparable population increases.

In other words, it was the exception (e.g., Gemini North Ltd., 1974; Dixon, 1978) rather than the rule that these studies considered the possibility of their being a unique impact on crime rates resulting from the type of newcomers and the situation they were coming to. In many instances because the developments were in a limited geographic area, the small numbers for criminal offences created anomalies which were difficult to analyze.

Research by Dixon (1978) on the impact of the Alaska Pipeline on Fairbanks supports the notion that economic development adversely affects criminal activity. Furthermore, the author points out that the increase in crime is out of proportion to that of population growth during development. In Fairbanks the per capita rate for total criminal complaints rose from 11.1 per 100 in 1973 to 13.5 in 1974 and were 15.4 in 1975. It is clear from the growth in the population -

11.8% between 1973 and 1974, and 24.8% between 1974 and 1975 - that the last year was the most crucial with regard to development.

A number of other studies or reports, while not explicitly linking the rate of crime to economic development, nevertheless indicate that certain types of crime are more prevalent in northern areas. The report by the Centre of Settlement Studies (1973) noted the high number of violent and accidental deaths in the Kenora area; between 1970 and 1973, 138 of the 189 violent deaths were associated with alcohol. In a report to the Royal Commission on the Northern Environment, Dr. Gary Goldthorpe, Medical Director of the Sioux Lookout Zone Hospital, pointed to the incidence of violent and accidental death in the north. In a six year period there were 164 deaths of treaty Indians in the Sioux Lookout Zone by violence*. Of these 49 were by drowning, 25 by burns from house fires, 24 by freezing to death, 13 by motor vehicle accidents, 13 by homicide, 10 suicides, 8 accidental deaths by train (being hit by a train), 4 accidental by firearms and 4 by falls.

Most of these deaths have been alcohol related or alcohol associated. Every single accidental death I do an investigation to see if drinking was involved and it is the case in well over half. (Royal Commission on Northern Environment, 1978).

*See also Cutler and Morrison (1971) for data on alcohol-related accidental and violent deaths among natives in British Columbia.

A study of northwestern Ontario (Giesbrecht et al., 1977) indicated that liquor offences were much more common in the Districts of Kenora, Rainy River, and Thunder Bay than in the province as a whole. This was also true for rates of drinking and driving charges. Furthermore rates of death due to accidents, poisonings and violence were considerably higher in the Kenora District and for the males in the other two Districts. Reports similar to the ones cited earlier suggest that many of the accidental and violent deaths in northern Ontario are related to heavy alcohol consumption.

Some indication of the type of impact that one is likely to expect from rapid economic development is available from reports on Reserves switching from 'dry' to 'wet'. In several instances a substantial increase in drunkenness and liquor offences is reported. For example, Simon Fobister, Chief of the Grassy Narrows Indian Reserve in Northwestern Ontario, stated that the crime rate doubled since band members voted to allow liquor on the Reserve. He cites statistics showing that in the eight months since legalization there have been 496 crime incidents, and in the same period in the preceding year there were 288. Most of these were considered to be related to heavy drinking (The Native People, December 17, 1976). Assuming that economic development will make liquor more accessible to some native communities where it is currently banned, or difficult to obtain because of isolation, one might expect certain negative

consequences along these lines.

In some cases economic development appears to have had a positive impact on the social life of the adjacent native community. At the Gull Bay Reserve in northwestern Ontario the number of violent deaths related to drinking appeared to decline after a cooperative logging operation connected with an alcohol treatment program in Thunder Bay was established. Although crime still occurred after the program was initiated it was considered the exception rather than the rule (Catholic Register, April 17, 1976). It must be noted, however, that the scale of this development project was not large and it was specifically designed to combat alcohol-related and other social problems in that area.

Although some of these accounts and studies are not oriented to establishing a link between crime, accidents and violence, on one hand, and economic development, on the other, they are relevant to the topic.

The high rates of crime and violence in northern areas, and specifically in certain northern communities, must be taken into account in considering proposals for rapid economic development and assessment of impact of the same. The expected impact of development on a community already disrupted by alcohol abuse and violence may be much more disastrous than on more stable communities with lower rates of crime and violence.

C. Public Health Problems

Several of the topics noted above might also be considered in an assessment of the impact of economic development on public health of the community. For example, an increase in violence or accidents likely result in an increased prevalence of admission to hospitals, clinics or other medical services.

The experience in Fairbanks during the construction of the Alaska Pipe Line suggests that the demands on services may be greater than expected. It also indicates that in making projection for expected impact the qualitative or structural components should not be overlooked:

By postulating a direct relationship between population size and the need for hospital beds and health care professionals, the health care industry in Fairbanks was deemed adequate and no impacts were anticipated, aside from the increased demands on the state laboratory.

....However changes in the structure of the health care delivery system and other aspects of the community caused the hospital and long-term care facility to be inadequate and changed the demands for health care manpower.
(Dixon, 1978: 158).

The Fairbanks Memorial Hospital was considered adequate to accomodate the population increases, but by 1975 the hospital was experiencing an 80% occupancy rate, which is considered the maximum limit for effective functioning. The hospital was inundated by inebriated persons admitted to the emergency department, and this phenomena was due, in part,

to the elimination of the communities drunk laws and the closing of its detoxification services. In addition, specialized doctors such as surgeons, were attracted to the hospital which meant that many cases were no longer referred to Seattle. These qualitative changes were primarily responsible for the inadequate projects.

Other reports of the recent experience in Alaska suggest that development may be accompanied by an increase in mental disorder as well as other problems:

... The Fairbanks North Star Borough Impact Information Centre compiled data on a number of indicators of stress that are commonly used to gauge the mental health of a community. Two of the most striking indicators of increased stress were that the admissions of new patients to the mental health clinic increased between 40 and 50 per cent between July 1974 and October 1975, and that the total number of divorce actions increased 100 per cent between January 1973 and January 1975. Of course, these increases could be, at least in part, a function of the increased number of people attracted to Fairbanks by pipeline activity; the centre, however, concluded that the increase probably reflected qualitative factors as well. The increased caseload at the mental health clinic was attributed, in part, to stress arising from the changes in the community that accompanied pipeline construction, to the challenge of changing values brought about by the experience, and to confronting decisions of a different kind. (Lysyk *et al.*, 1977: 95).

....The Social services had to cope with an increased number of children left alone for long periods of time... Teenagers in Fairbanks experienced greater neglect as a result of their parents working longer hours or their complete absence from home on pipeline jobs. The Fairbanks centre observed that the number of runaway

teenagers brought to the attention of the authorities had almost doubled. (Lysyk et al., 1977:95).

The authors of the Alaska Highway Pipeline Inquiry (Lysyk et al., 1977) indicated that the proposed pipeline would likely exacerbate the already high rates of "alcohol abuse and related problems which are already very grave in the Yukon". In commenting on responses to some of the proposals by Foothills Pipeline Ltd. the authors state:

Nor was much confidence expressed that the provision of on-site tavern facilities, and company-run diagnostic, treatment and referral services would enable the Applicant to prevent or deal with employees' alcohol-related problems, even within the camps. (Lysyk et al., 1977:99).

They also point out that the Indian people are likely to experience even more severe negative consequences than is already their lot:

In Canada, Indian people are already disproportionately affected by alcohol abuse and its negative social, economic and medical consequences. The situation is credited partly to their position outside the dominant society's socio-economic base and isolation from their traditional subsistence lifestyle. In the Yukon, this situation could be aggravated by pipeline activity. (Lysyk et al., 1977:99).

A similar theme is evident in Berger's account of the Mackenzie Valley Pipeline Inquiry:

The subjects of heavy consumption and drunkenness recur in every discussion of social pathology in the North. Both native and white people regard the abuse of alcohol

as the most disruptive force, the most alarming symptom, and the most serious danger to the future of northern society. (Berger, 1977:154).

Research on alcohol problems in northwestern Ontario indicates that existing rates of alcohol-related diagnosis are more common than in Ontario generally. "Alcoholism" was found to rank between 5th and 7th of all hospital diagnoses in this region in 1974, whereas it was 28th for the province (Giesbrecht et al., 1977: 107-108). Furthermore research into liver cirrhosis mortality rates, frequently used as an index of the prevalence of alcoholism, found that in 1976 the northern region of Ontario had highest of 11 regions of the province (Single, 1978). It is therefore also of some interest that this region had the highest resource capacity (per estimated alcoholics) for detoxication beds, inpatient beds (other than psychiatric hospital) and recovery home beds (Marshman et al., 1978: Table 2-3). Clearly there are indications both from consumption statistics reported earlier (p. 41, above) and these data that alcohol problems in northern Ontario are above the provincial levels in general.

In addition to hospital admission statistics or alcohol-related deaths, alcohol abuse is also evident in social problems involving children. Enforced removal of a child from his home occurs in all communities but the extent is much greater in the north. The Family and Children's Services of the District of Kenora told the Royal Commission on the Northern Environment:

In New Osnaburgh we this year have to care for ten per cent of all the children living here. In all but four of these cases, the abuse of alcohol was directly related to the need to remove the child from his home (Royal Commission on the Northern Environment, 1978:166).

These findings and impressions from northern Ontario, while not necessarily linked to economic development, resemble the reports coming from the Territories of Canada and Alaska. Namely, the prominence of alcohol as a public health problem and as source of social disruption in many communities is indicated. Although it is not at all clear from these scattered impressions and statistics, which type of public health problems are the most likely to occur, or at what stage of economic development, or how they should be effectively handled in the aggregate, this work points to the need for thorough investigations of alcohol-related public health consequences as part of the monitoring of development projects.

D. Summary

An investigation into social and physical problems related to alcohol tends to suggest the notion that when alcohol consumption is high, so are many other social problems. Crime, accidents, violence, mental and physical health are areas in which high incidence rates are frequently associated with high alcohol abuse. The previous chapter on alcohol consumption tended to

show a non linear relationship between consumption and rapid economic development. Similarly, other social problems appear to increase more quickly than population increases would dictate, when accompanied by rapid economic development in northern isolated areas. Most socio-economic impact studies tended to downplay this phenomena and generally did not collect comprehensive data to support or reject this hypothesis. However, a more in depth analysis by Dixon (1979) and Gemini North Ltd. (1974) demonstrate the importance of a structural analysis in examining social problems.

VI. CONTROL MEASURES

A. Introduction

A number of causes have been proposed to explain the high alcohol consumption in isolated areas; and to a large extent these underlying theories are instrumental in the development of control measures. Authors have attempted to explain the high alcohol consumption by referring to a "bush theme" (Ervin, 1968; Winkler, 1968). It states that the frontier atmosphere is characterized by either feast or famine and therefore when alcohol is available it is usually drunk until it is finished. Certainly this would explain the frequent reports that the northerners drink rapidly until all the liquor is consumed. Others have postulated that drinking is the norm; a socially reinforced and acceptable form of behaviour (Gemini North Ltd., 1974). Proponents of these theories generally believe alcohol itself is the main problem and support alcohol control measures in an attempt to reduce the general availability of alcohol (e.g., reduced number of outlets, higher prices, interdiction orders etc.).

Another major approach used to explain the high alcohol consumption has been to consider alcohol abuse as a resultant of other individual or social problems. Some authors have suggested that alcohol abuse is a consequence of depression, self-dissatisfaction, anomie and economic frustration (Clairmont, 1963). Ervin (1968) insinuates that the northern natives do not have a strong sense of personal identity which

could be partially responsible for high alcohol consumption rates. Heavy alcohol consumption may constitute an attempt to achieve social insulation in single-industry towns, according to Himelfarb (1976).

Control measures, designed to reduce alcohol consumption and its related problems have originated from three major sources: the governments, industries and the host communities. Each of these entities (groups) have the capabilities to implement controls within their powers.

B. Government

Since the control, sale and distribution of liquor is under the jurisdiction of the provinces the federal government has largely not been involved in this matter.

Historically the natives were the major targets of alcohol control measures, as they were prohibited from drinking until 1958 in the Northwest Territories. Since then provincial governments have implemented a variety of interventions ranging from stringent law enforcement (deterrence), education programs, to special clinics and detoxification centres to deal with the problem.

Attempts to treat alcohol problems by governments in the north appear to have been largely unsuccessful. Gemini North Ltd. (1974) attributes the failure to curb the alcohol problems to three factors:

(1) The failure of the government to recognize alcoholism as a disease

- (2) Lack of specialized training
- (3) A tendency to bring in outside help (i.e. southerners) to deal with the problems of northerners.

According to P. A. R. Consultants:

The history of alcohol and drug programs in Canada's north have been largely unsuccessful. These programs have been poorly conceived and financed. Many of the programs for natives were designed by southern Canadians and operated by northern whites. These programs have not worked (1978:2).

One possible reason for the poor success is the low budget the government expends for alcohol control measures. For example, the government of the Northwest Territories received a net profit of \$2,817,285.00 on liquor sales in 1971/72, yet the amount allocated for alcohol education was \$34,987.00 (Gemini North Ltd., 1974, p. 572). Revenue and expenditures have increased substantially since then, as profits from liquor sales were \$4,429,000 in 1977 in the Northwest territories (Control and Sale of Alcohol, 1976) and in 1977 funds totalling nearly \$1,000,000 were spent covering a wide variety of alcohol related services (education, workshops, detoxification and referral centers, counselling research, drop-in centres). Whether or not these increased expenditures will have an impact on alcohol problems in the Northwest Territories has not to our knowledge been determined.

It must be noted that the government's response to alcohol problems is often a reflection of community sentiment or the influence of various pressure groups. On the one hand governments are often encouraged to make alcohol widely available,

in part to reduce the sense of isolation and deprivation that northerners may have. On the other hand, the obvious indications of alcohol problems in some northern settings provide pressures to 'do something'. A typical approach is to fund education, treatment or rehabilitation programs. These programs, while important, are probably not as effective in a preventive sense as controls on the availability of alcohol.

C. Industry

Industries have focused on the problem of alcohol in relation to:

- 1) the effects of alcohol on employee performance
- 2) the effects of the employees on alcohol consumption and general disruption of the host community.

1. The problem of poor employee performance, absenteeism, and other alcohol-work related problems is a major concern to industries in the north, but also the rest of Canada. It has been estimated that approximately one billion dollars have been lost due to absenteeism from alcohol and related problems (Canadian Labour Congress, 1978). Practically all large companies and their unions have developed Employee Assistance Programs to deal with the problem drinker with fairly good results (P. A. R. Consultants of Canada, 1979)). The programs generally treat alcoholism as an illness which is primarily caused by social, family and individual factors. The companies have initiated a variety of different programs and policies in order to curb the effects of alcohol on work performance. The

type of approaches used are beyond the scope of this paper; it is suffice to say that a number industries are concerned about alcohol problems among employees.

2. In terms of reducing the effects of the development on the nearby communities the companies have instituted a variety of policies and regulations.

Some companies, for example Dome/Canmors Beaufort Sea Project, instituted a "dry camp" policy where liquor was forbidden on base operation and its ship. Dome/Canmor exercised stringent control over liquor on camp, conducting baggage searches, and infringement of the liquor policy was grounds for dismissal. For the operations away from the nearby town of Tyktoyaktuk there was controlled access to town. However, for operations based near or in the town alcohol abuse became an issue as employees frequented local taverns, causing some disruption.

In response to the dry camp policy others have recommended that a "wet camp" policy is more effective. For example, Foothills Pipe Line Ltd. (1975) and a report for the Imperial Oils Cold Lake Project (Resources Management Consultants, 1978) recommend that construction workers be housed in self-contained camps well removed from nearby communities and that causal transportation into town be controlled. The proposal by Foothills Pipe Line Ltd. for the Yukon construction sites is as follows:

The camps will include taverns from which non-employees will be excluded. The workers will not be allowed to bring their

families with them, their vehicles will be prohibited from the camps, and, when on rest leave, they will be bussed directly to an airport for transport south. (Lysyk *et al.*, 1977: 92).

However, the Alaskan experience as well as other information give rise to reservations about this approach: for example, in Fairbanks the workers won the right to live in town. Also, there were strong indications that following a southern-hire policy may not prevent an influx of workers in search of jobs, or prevent an influx of numerous transients (Lysky *et al.*, 1977).

In short, even if drinking by company employees could be effectively contained to the camp setting, the growth of the service sector in the adjacent community, and the attraction of 'fortune hunters' and transients to the town may result in alcohol problems clearly outside the control measures of the major company. Therefore, in a general sense, these type of policies might fail with the result that alcohol-related disruptive incidents in nearby communities would probably increase, including sexual exploitation of females, assault and other crime.

D. Community Response

As mentioned earlier, government control measures may reflect the dominant sentiment of the community. Furthermore, local communities typically have the option of controlling access to alcohol. For example in Ontario the Liquor Licence Act give local municipalities control over whether or not

to open or close liquor stores or licenced premises. Closing of store, which happens infrequently, usually is initiated by a vote; whereas opening is initiated through a more informal assessment of community sentiment. The proposed hearing for a new licenced premise is publicized in the local paper and the community has the option to reject a new establishment (Liquor Licence Act, 1975, Liquor Control Act, 1975).

Prohibition has been initiated in some communities of the north by means of a community vote (examples are Panguintung, Roe-edzo, Frobisher Bay, the N.W.T.). The reactions from citizens within these new "dry" communities have been mixed. In some communities, such as Panguintung, there has been a backlash from civil libertarians; teachers and other professionals have applied for transfers to other communities, and tourism has declined (Edmonton Journal, 4/3/78). In other communities such as Frobisher Bay, there have been reports of reduced crime, motor vehicles accidents and other accidents. (All about the North, 1978) as well as substantial reductions in drunkenness and assaults (Smart, 1978).

Whereas in some communities (mainly native) there was a vote to prohibit liquor, in others a formerly 'dry' position was reversed in that the residents voted to permit liquor. In February, 1976, Indians of the Grassy Narrows Reserve (Ontario) voted to permit liquor. The result, according to Simon Fobister (Native People, 12/17/76), is that crime incidents have increased from 288 to 496 since liquor has been allowed on the Reserve.

Community efforts have influenced alcohol control measures with regard to hours of operation for liquor outlets. In October of 1973, (Toronto Star, 10/3/73) the only liquor store in Moosonee Ontario was closed on Saturdays following complaints by priests about weekend drinking. Unfortunately the change in volume of drinking has not been empirically tested since the reduced hours of operation.

In northwestern Ontario there have also been pressures to control public drunkenness and related behaviour by banning the sale of fortified wine. This proposal was eventually implemented in 10 outlets in the Kenora area and adjacent communities.

However, these control measures must be put into perspective. First of all most of them are directed at the native population and not specifically at heavy drinking associated with development projects. For example, bans on low-priced domestic fortified wine, although a preferred drink by some native who are heavy consumers, is not the typical beverage among well-paid construction workers, or employees of primary industry operations. Consequently they are not likely to be influenced by controls on these wines.

One should also note that total bans or partial restrictions in northern communities may be effectively implemented against some resident populations. But it may be more difficult to control access to liquor among southern-oriented well-paid workers. They will have access to transportation to bring in liquor from outside, and have the cash to pay for

bootleg liquor. Furthermore, the ban may not be seen as applying to them, consequently a breach of the law may not be perceived as a serious matter neither by themselves nor their peers.

E. Summary

It is apparent that alcohol-problems are likely to arise in northern areas experiencing rapid economic development, regardless of the control measures initiated. There are also indications that many of the host communities have severe alcohol problems before development takes place in their area.

If the work camps are 'dry' then the towns or villages that host the workers during off-hours excursions are likely to experience social problems resulting from heavy consumption. If the work camps are 'wet' but within easy travel of towns then the workers may prefer to do their drinking in the town, along with other newcomers attracted to the area and with local people. Again these are likely in alcohol-related incidents.

Possibly work situations which are the most isolated and with alcohol allowed on the work camp are least likely to result in social disruption of the life of the local population. However, because new primary industry projects may build on existing resource development operations, or near them, they end up being located near existing communities.

Where the work sites are truly isolated, employers who provide a variety of on-site leisure facilities, including

liquor outlets, are likely to discourage frequent visits outside the work camps, while at the same time reducing the sense of isolation and deprivation likely to be experienced by the employees.

VII. RESPONSES FROM COMPANIES AND UNIONS, AND
EXPLORATORY INTERVIEWS

A. Responses to Letters

A number of companies and unions were contacted in the course of this study. The purpose was to obtain consultant and other reports containing material on alcohol consumption, alcohol control measures and the consequences of heavy consumption. The organizations selected were considered most likely to be involved in primary industries in isolated areas undergoing rapid economic development.*

There was a response rate of 57% (21 of 54) to the letters sent to companies, and a response rate of 38% (8 of 21) from the unions.

Eight of the 21 companies responding included material such as consultant reports. Four of the eight unions included material, mainly dealing with employee - management problems (or employee problems) and alcohol.

Many of the respondents offered useful suggestions especially names and addresses of persons to contact and/or titles of relevant reports and where they could be obtained. These suggestions were particularly helpful in expanding the number of documents brought

*Refer to Appendices A and B for details.

to our attention.

Respondents also offered comments on a number of topics (Table 2). The most prominent focus of the comments was on alcohol programs for employees or union members. Although the letter asked about alcohol consumption, control measures as well as consequences, the responses tended to focus on programs for problem employees. For example:

We have not conducted studies related to alcohol consumption. We do however, view alcoholism as an illness and provide for treatment.

The author of one letter implied that camps in remote locations would not have heavy consumption or alcohol problems.

We have neither conducted nor sponsored studies on alcohol consumption and related aspects. Our operations in the north have been mainly limited to camps in remote locations and, as a result, we have not experienced a situation similar to the one you referenced.

However the author of this letter then directed us to a socio-economic study conducted during the construction phase of the company's operation.

Other respondents specifically addressed the

TABLE 2

CLASSIFICATION OF RESPONSES FROM
THE COMPANIES AND UNIONS

Type of Response	Company Response	Union Response
Enclosures on:		
The employee, alcohol problems and control measures	3	4
Socio-economic or social impact studies	5	
Comments relating to:		
- Alcohol consumption will increase with economic development	2	
- Alcohol consumption will not increase or decrease with economic development	2	
- The company does have alcohol programs for employees	11	1
- Alcohol is considered a disease by official company policy	1	
- Regulations regarding the distribution of liquor	1	1
- Suggestions of reports or people to contact	6	3
- No useful information or comments	8	2

Note: For the above classification responses from any one letter may fall into one or more categories. All responses are categorized and therefore the total is greater than the number of letters received. There were 31 responses to 54 letters sent to the companies and 8 responses to 21 letters sent to the unions.

possible relationship between alcohol consumption and economic development. Two respondents indicated that alcohol consumption will increase with economic development, as illustrated by the following quotation:

Undoubtedly you will find some correlation between rapid development and alcohol consumption, particularly, I would think, in the more isolated areas where conditions may not permit the more normal dissipation of mental energies.

Two other respondents indicated that alcohol consumption was not likely to increase in relation to economic development. The following quotation indicates this view:

We have undergone various degrees of expansion and contraction - depending on market and economic conditions at the time - at our operations during the years. To those of us that have been with the Company witnessing these changes, there has been no apparent per capita increase or decrease in the consumption of alcohol during these economic adjustments. Those who are not working due to layoff, etc., move elsewhere, so in most cases, those who are living in the different communities are working, and spending their usual amount of income on food, alcohol, recreation, etc. When we expand we have more people living in the communities, and they add their incomes to these various pursuits. We have not developed any conclusions that individuals drink more or less during the economic peaks and valleys, we only conclude that there are more or less people doing a certain amount of drinking.

Another response provided a detailed summary of the alcohol control system in isolated villages and work camps. Each family can obtain up to two cases of beer and two bottles of wine per week. The inhabitants of the camp have access to a large tavern six days per week, open between 7-9 p.m. The response illustrates that isolated work camps may have regulations on the accessibility of alcohol that differ from organized and more urbanized sections of the provinces.

B. Interviews with Personnel Managers

In northwestern Ontario's economy today, forestry and mining are the most important industries. Transportation and tourism are significant but not as important as sources of employment to the Region as natural resource extraction (L.. Mitchell, 1978).

In order to obtain first hand information from resource based companies in northwestern Ontario, four exploratory interviews were conducted with personnel managers whose company operations were located outside of Thunder Bay. Two of the companies, are mining operation and one paper mill are based in small singly industry communities while two lumbering operations have bush camps. The interview results are impressionistic in exploring the benefits and drawbacks of living and working in a single industry

town, with particular attention to alcohol problems. (See interview Schedule in Appendix C). The material from the interviews is summarized into three sections:

(1) The benefits and drawbacks of northern employment

(2) Alcohol problems in remote areas

(3) Detection and intervention measures

(1) Northern employment benefits and drawback benefits

The personnel managers of the companies described some benefits of employment in northern communities or bush camps. Good rates of pay and employment security appeared to be the major advantages. The personnel manager for the logging industry reported that working outdoors was an incentive for their employees. Outside of the work situation, the necessity of accommodation was often seen as benefits because the companies subsidize housing rental and purchases. In the areas of leisure activities the community based operations had access to recreational facilities, such as swimming pool, bowling, golf, basketball etc., and the bush camps provided more limited facilities, such as pool tables, ball field and occasionally a hockey rink. Of course, the accessibility to outdoor activities (eg.,: hunting, fishing, canoeing) was also considered a benefit.

Drawbacks:

The high cost of food, housing shortage and inadequate shopping selection were considered the main drawbacks to employment in a remote area. In the work situation, shift work, slow upward mobility and difficult working conditions because of weather were identified as drawbacks in some instances.

In the area of leisure activities, isolation and limited access to urban centre and a poor selection of recreational activities in bushcamps were noted in the interviews.

C. Alcohol Problems in Remote Areas

While alcohol consumption may not be greater in remote areas than in urban centres, it becomes more visible because of the difficulty in concealing problems and lack of privacy in a small community. One respondent did feel residents in remote areas tended to frequent bars and hotels more because of the lack of variety of things to do and people to meet.

Boredom and isolation were seen to be the main factors contributing to problem drinking in remote areas. There was no clear indication that single or married men had more problems related to alcohol. The community based companies see more married men

with alcohol problems but suggested it would be easier for single men to leave the job and community if heavy drinking interfered with his job. The married women have problems because of the confinement, lack of work etc. and may aggravate the husband's drinking because of financial or personal problems, frustration or her drinking. In some instances the wives' dissatisfaction is so great that the men may leave the company and community.

In addition there is not any particular work situation, age or occupational grouping having more problems related to alcohol than others. It was suggested that gambling could be as much a problem as drinking. One respondent felt strongly that any job situation involving pressure or stress such as keeping pace with a machine or the extra responsibility of a supervisory position could lead to more dependence on alcohol or drugs. As well, long service employees seem more prone to problem drinking.

3 Detection of Alcohol Abuse and Control Measures

Detection of alcohol problems, before working performance is affected, is facilitated in small remote communities. Activities of individuals are far more visible in a small community due to the fewer number of people, and therefore closer relationships among all persons. One manager commented that employees

with problems often felt too conspicuous to enter a Personnel office but would phone after hour when drunk or in crisis as a first step in seeking help. Problems after work hours may include rowdiness, fighting, destruction of property and impaired driving charges; all of which are usually discovered by managers via other employees or friends. The small town atmosphere is thus ideal for detection of alcohol abuse, often before work performance is affected.

However, treatment and control measures are not formally implemented until work performance is affected. Alcohol related problems evident during work hours are indicated by slow productivity, mistakes, accidents and drinking on the job. Absenteeism, especially on Mondays, was viewed as a possible alcohol problem, and such employees were noted on a "suspect list". For all of the detection measures at work, the foremen and supervisors play a critical role in detection. This role may sometimes be hampered by the interrelationships between the employees and supervisors, common in the small town atmosphere, resulting supervisors covering up for employees in some instances. All respondents affirmed the need for education at the supervisory level in the detection and treatment of alcoholic employees as well as support from the company.

Company control measures for dealing with alcohol abuse customarily take two forms: disciplinary and

treatment. Disciplinary measures include, sending a hungover or drunk employee home without pay, discussions, suspensions, verbal and written warnings. In many instances a warning was sufficient to alleviate the drinking problem or its interference with job performance. Many employees stop drinking on their own or with the help of their doctor and/or Alcoholics Anonymous.

Most companies have policies on alcoholism referral and treatment, and referrals are either mandatory or voluntary. Alcohol treatment is recognized in company policy, sick leave plans and is usually conducted with the close liaison and cooperation of the unions.

Prevention is a difficult area because managers feel it is not feasible to prohibit alcohol even in bush camps. Employers are limited in what they can provide, especially related to isolation, as they must operate "where the trees are". Other suggestions about job enrichment through isolation were made as well as availability of a community social worker, not under the Company as individuals feel little power over their lives because company regulates so much.

The four respondents identified isolation, the high cost of living, and lack of variety in services and leisure choices as drawbacks to living in small

'development' communities. There were compensated by good wages, job security and living close to nature. There was no consencus as to whether or not alcohol consumption or alcohol problems were most prevalent in remote work sites than in southerly location, however, alcohol problems were considered to be more visible.

It is apparent that a number of the topics touched on in these exploratory interviews might be examined more closely and systematically. Further work along these lines should definitely seek to obtain the views and accounts of employees and union representatives.

VIII. SUGGESTIONS FOR MONITORING ALCOHOL PROBLEMS

In order to draft an adequate monitoring strategy, information is required on the host community, the type of data routinely available from agencies in the area, the nature of the proposed development, and the other constraints or parameters of the monitoring project (e.g., time-frame, financial support, mandate of the sponsor). In planning a strategy other research conducted along similar lines should be considered. Ideally, one might first, prepare a typology which seeks to organize the existing research according to the following topics or questions:

What type of host communities are there? Variables such as size, ethnic characteristics, main source of income, social cohesion, types of formal social control, and past experiences with regard to development would be considered.

What types of development are there? Here one might consider the accommodation and leisure facilities of the proposed development, the size of the project relative to the host community, the nature of the workers (age, ethnic group, where they come from, etc.), the type of social controls planned by the company, and other topics.

Then the following question might be addressed: Considering past experiences involving a variety of development situations - i.e., different host communities, different types of primary industry projects, different controls - what is one likely to expect from the situation.

In light of the material summarized in the preceding sections of this report, it appears premature to develop such a typology. There are few studies which have systematically examined alcohol problems in relation to development, therefore an undertaking along these lines would be largely hypothetical.

It seems more appropriate to present the topics for consideration when planning to monitor alcohol-related problems.

Monitoring social problems in relation to development in northern areas is constrained by four general conditions. These are: (1) the type of host community involved; (2) the nature of available data routine collected; (3) the nature of the development, and, (4) the orientation of those conducting the monitoring.

1. The host community: Considering that alcohol problems are likely to be more prevalent in northern areas than in the south, it may be difficult to differentiate the unique impact of development from the current behaviour in the community. For example, it might be argued that communities with high rates of alcohol problems will continue to have elevated rates whether or not development occurs in their area. In certain development situations there may be no pre-existing 'host' community. Here the longer-term workers at the site may be considered the 'host' and those who arrive at a later stage the 'newcomers'. Alcohol problems may increase or decrease in relation to interactions between 'old-timers' and 'new-comers' to the project.

2. The nature of available data: In northern areas the monitoring of alcohol problems sometimes presents unique complications. Official statistics on alcohol consumption, on public order or public health problems related to consumption, may be sketchy because the bureaucratic structures or facilities which typically generate these statistics may be less developed. In some settings much of the alcohol consumed may be 'unrecorded' that is, brought in from sources outside the local or regional liquor control system. However, if transportation links to the south are few and infrequent, this would facilitate monitoring of liquor consumption.

Furthermore, persons considered 'trouble-makers' and/or with alcohol-related health problems may be fired or transferred to medical services outside the area. These procedures would tend to deflate estimates of the number of alcohol-related cases in the development area.

In the most isolated work sites, almost all, if not all, of the relevant data would come under the jurisdiction, or at least informal control, of the development company. Since it is in the company's interest to emphasize the positive and downplay the negative aspects of their project, this might complicate access to the statistics or their validity.

Another major problem is that the size of the host community and newcomer population is often small, which prevents an adequate interpretation of the data (due to anomalies present as a result of small N's).

3. The nature of the development: A monitoring strategy should take into account the size of the project, the length of construction phase, accomodation and other arrangements provided by the company, the economic impact at the aggregate level as well as on the average worker or local resident, and the type of controls on alcohol planned by the company. The characteristics of the workers are also important; for example, what is the age-sex composition of the group? What are their drinking habits likely to be? What proportion have a history of heavy drinking? Is this proportion greater or less than that of a similar age-sex cohort in the host community?

Whether or not those conducting the monitoring can obtain information along these lines will influence the type of conclusions that can be drawn from the study. For example, it is sometimes assumed that development has a unique negative impact at least as far as alcohol problems are concerned. However, another interpretation might be that development provides an opportunity - an optimum geographic, socio-cultural, and economic situation - for a number of persons already prone to heavy drinking to drink heavily. Although some of the complications may be unique, the level of consumption may be largely a reflection of a high concentration of persons with heavier than average drinking habits.

4. The orientation of those monitoring and assessing impact:

As we indicated in preceding sections, a number of socio-economic impact studies are oriented to dealing with social problems in terms of facilities (e.g., how many hospital beds are required to meet the needs of the increase in population). In our view other considerations are also relevant. The work by Dixon (1978) most clearly exemplifies the type of approach we have in mind. This author not only takes into account the number of facilities, but examines changes in bureaucratic structures and other social arrangements accompanying development. Furthermore, Dixon clearly points out the limitations of a mechanistic mode: development may be related to an exponential change in social problems. However, Dixon's conclusions while relevant to the experience in Fairbanks, may not apply to development generally.

The 'descriptive-anecdotal' is another approach found in the literature. It is most evident in presentations of native interest groups. Possibly because of their orientation to hearing the views of a variety of such groups, this is the dominant approach in Berger (1977) and Lysyk *et al.*, (1977). These documents contain a large and highly interesting collection of accounts, impressions and descriptions of the socio-cultural, economic and political aspects of the north, and of the proposed developments. What appears to be lacking is a systematic presentation of relevant data, such as population trends, indicators of economic base, age

and ethnic characteristics of the communities, recent experiences with regard to development, etc. In this regard we agree with Salisbury's (1978) assessment of Berger (1977): some effort might have been devoted to a presentation of statistics on the characteristics of the communities, the prevalence of social problems, and their relationship to development projects in the past.

In the following paragraphs, preliminary suggestions for monitoring alcohol problems are presented. The practical relevance of these suggestions will depend on the constraints of a particular monitoring project, including those noted above, as well as the fiscal restraints and the geographic location of the development enterprise to be monitored.

1. Drinking behaviour: Of particular importance are the per capita and per adult consumption rates, the cost and sources of liquor, and the main beverage choices. This information can usually be obtained through official bodies responsible for the control and sale of liquor.

Information on drinking patterns - such as, how often individuals drink, how much they typically drink at a setting, what type of behaviours are commonly related to light and heavy drinking - is more difficult to obtain, especially if systematic data is sought. Thus primary data collection would be required.

Information on the differences between the local residents and visitors with regard to drinking habits is also

of relevance. Here again, the researcher would have to rely on impressionistic data or a survey.

2. Public Order Problems: The main source of information in this area is police and/or court statistics. Data on liquor offences, drinking and driving offences, and certain types of violence, especially assaults, rape or wilful damage should be considered. In some situations (e.g., drinking-driving offences where there are few roads) certain offence categories may not be relevant.

The researcher should also pay attention to the total number of offences, the proportion that are clearly alcohol-related, and the size of the law enforcement agencies involved.

Less formalized information on the extent of public order problems related to alcohol might be obtained from managers or licenced premises or liquor stores, or from company personnel or union leaders. Police and Court officials should also be contacted in order to facilitate interpretation of the data, and to obtain general impressions with regard to the extent of alcohol-related problems in the community.

3. Public Health Problems: Hospitals, clinics and company medical services are important sources of information. Statistics on drunkenness, acute alcohol poisoning and 'alcoholism' should be collected if the type of services in the community make this possible.

Also relevant are statistics on trauma (e.g., related to fights, falls, burns, other accidents) or suicide attempts since they frequently involve alcohol.

Mortality statistics on accidental and violent deaths appear to be elevated in northern communities, and frequently reflect alcohol-related incidents. Liver cirrhosis mortality, while generally a good indicator of the prevalence of heavy consumption, may not be as relevant to northern development communities, especially if there is a high turnover in the work force and the population is quite young. Typically a number of years of heavy drinking is required before the risk of developing cirrhosis is high. Some of the heavy drinkers involved in development projects may have left the area by the time liver damage is evident. Thus liver cirrhosis statistics from the area would not accurately reflect the prevalence of heavy consumption.

A number of other sources, such as social welfare offices, mental health services, children's aid services, etc., might be able to provide estimates on the proportion of cases involving alcohol. While special arrangements may be required in order to obtain regular data from them, it is important to consider these agencies. Their staff may be in contact with persons, or with certain social problems, that do not typically turn up in police department or hospital/clinic statistics.

4. Community leaders and interest groups: Many of the sources of information listed above involve 'official'

responses to alcohol problems. In order to obtain more global, albeit impressionistic, views of the situation it is important to be in touch with those who may be among the first to know when heavy drinking causes disruption in the community. Native leaders, municipal officials, company representatives or personnel managers, union leaders, and others, should be considered as valuable contacts in order to obtain impressions on the nature and extent of alcohol problems. Also, established members of Alcoholics Anonymous, or of other recovery groups for heavy drinkers, may be important sources of information for the researcher seeking to obtain overall as well as specific impression of alcohol problems in the area.

A number of other topics also need to be addressed in planning a monitoring strategy. These include questions about the reliability and validity of the data: for example, are the statistics influenced by an increasing awareness in the community that monitoring is underway? The research must also consider the scope of the results: for example, what type of social consequences and what proportion of heavy drinking incidents are reflected in the data?

However, the most important questions are the most general ones. Why is the monitoring of alcohol problems implemented? Who is sponsoring the work and who is it for? In what way and by whom will the results be translated into interventions and controls?

IX SUMMARY

The focus of this report is social problems related to economic development. The work examines 'social problems' related to development, with special reference to alcohol-related problems.

Most socio-economic impact studies consider the negative consequences that are likely to arise from development. However, they appear to downplay the problems or treat them as logistical questions: that is, can the facilities be provided to accommodate the public order or public health cases likely to arise from development. Earlier government sponsored studies tend to be oriented to the view that development will have a beneficial impact on the local residents including the native population. Recent inquiries by federal and provincial bodies provide another perspective: in this work the negative social consequences of development are a major basis for reservations about development. In these documents the 'social problems' likely to arise as a result of development are addressed, and the special impact on native communities noted. Reports by special interest groups, especially natives, focus primarily on the negative social consequences of development.

The three types of assessments examined - private consultant reports, government sponsored studies, and reports representing native interests - differ in their perspectives and the assumptions. However, there is one common element apparent in this work: systematic assessment of the social problems through the presentation of statistical data is absent from most reports. Although there are a few important exceptions to this generalization, most of the reports examined in this overview either focused on facilities - often assuming that a linear quantitative approach was adequate, or presented anecdotal material on the expected or past experiences with regard to development.

There are a number of reasons why alcohol is an appropriate foci for assessing the social impact of development. Alcohol is likely to become more available and conventional controls of alcohol problems are likely to be weaker in development communities. Since heavy drinking and the social problems likely to arise from it involve persons from a variety of socio-economic backgrounds and a number of social roles (e.g., work, family, press), the assessment of alcohol problems may be one useful indicator of a community's adaptations to development.

There are indications that rates of alcohol consumption are higher than average in the northern

areas of Canada. Some work has attempted to link the rates to economic development. Furthermore, the type of beverages consumed - a greater preference for fortified wines, a larger proportion involving spirits, and a smaller range of beverage preferences - suggests that much of the drinking is oriented to drunkenness. Although natives are presented as the stereo-typical heavy drinker of the north, this may in part be a reflection of their modeling the drinking of non-natives in northern communities. The factors contributing to the overall consumption in northern areas have not been clearly identified. There are few studies which systematically examine the relationship between development and alcohol consumption levels.

The northern areas of Canada are considered to have above average rates for social problems, especially those linked to heavy drinking. Crime, violence, accidents, and various public health problems have been noted as being common in northern communities, and have been identified as potentially linked to development. In some situations the number of incidents have increased out of proportion to the population growth that accompanies development. Both early and recent reports of frontier communities note the largely negative impact on the native Indian

population.

The control measures initiated or proposed include 'dry' work camps or 'wet' work camps where the movement of workers off the camp is restricted. Some native communities have responded to alcohol problems by initiating local prohibition or special restrictions on alcohol sales.

Each of the various approaches appear to have undesirable consequences, and research to date has not indicated that one is superior to the other. A 'dry' camp policy may encourage heavy drinking by workers in the local community adjacent to the development, whereas a 'wet' policy does not adequately deal with the alcohol problems resulting from a general increase in the population of the host community, with or the attraction of transients to the area. Possibly those development projects located some distance from established communities have a potential advantage in this regard: the company can provide access to liquor but determine the conditions under which it is consumed, as well as realistically restrict movement of workers off the site and access of non-workers to the development site.

The responses to our letters to company executives and union leaders indicate that there is concern about alcohol problems among employees in isolated

work sites. The typical response to these problems appears to be to provide informal or formal rehabilitative or counselling services for employees. Most of the respondents were not able to point to social impact studies in which alcohol consumption or alcohol problems were a point of focus. Of the few who commented on the relationship between development, there was no consensus as to whether or not consumption rates were likely to increase in relation to development.

A few company managers from primary industry operations in northern Ontario were interviewed. They noted that the main advantages of work on development projects was the high pay and proximity to a natural setting. The disadvantages were the isolation, the cost of goods and services, and the lack of leisure and other facilities, (e.g., stores) commonly found in urban settings. The respondents, while not in agreement as to whether or not alcohol consumption was above average in the development settings, indicated that alcohol problems would be more obvious. Problem drinkers might approach company officials informally for assistance. The managers focused on employee alcohol programs by the company when asked about preventive measures.

In the report a number of suggestions are presented for monitoring alcohol problems. The researcher should

take into account the constraints arising from the nature of the host community, the nature of data routinely generated by agencies in the area, the nature of the development, and his or her own orientation to the proposed research. In assessing alcohol problems, the rates and patterns of consumption should be examined. Also the researcher should collect statistics on public order and public health problems likely to be related to heavy drinking. In conducting this work, it is important to consider the impressions of community leaders and interest groups.

APPENDIX A

Methodology

The project was primarily a literature search of published and unpublished material related to economic development and social problems (specifically alcohol problems) in Northern Canada and Alaska. Alcohol consumption, problems associated with alcohol, and intervention strategies were the specific topics of interest. The collection of the material was considerably limited by time constraints (three months).

The material was collected primarily from libraries; which included public libraries in Toronto, Ottawa and Thunder Bay, company and union libraries, and other private collections. A computerized literature search was also conducted in order to assist in the collection of material.

In addition to the above, 54 letters were sent to the chief executives of companies, and 21 to senior union officers (for more details see Appendix B). The companies, selected from the 200 largest industries in Canada, were those involved in primary resource development (e.g., mining, lumber, hydro, oil and gas). Unions were selected on the basis of whether their members were likely to be involved in primary industry.

Exploratory interviews were also conducted with personnel managers of primary industry in Northern Ontario. The managers were selected on the basis of accessibility to the researcher working in Thunder Bay. Tentative arrangements for ten interviews were made but in the end only four managers were able to participate.

APPENDIX B

Letter Sent to Companies and Unions

Dear

Recently we received funding from the Royal Commission on the Northern Environment (Ontario) for a pilot research project. We are preparing a review paper and a bibliography on the topic of economic development and alcohol consumption in isolated areas of the provinces and territories of Canada.

The purpose is to explore the relationship between rapid economic development and alcohol consumption. Furthermore, we are seeking to identify company/union programs or policies designed to reduce social problems.

We are writing to inquire if your company/union has conducted studies, or sponsored consultant reports, which contain information on alcohol consumption, alcohol control measures, or on the consequences of alcohol consumption. More general studies of the social aspects of development in which alcohol consumption or alcohol problems are considered as sub-topics would also be relevant to our work.

We would very much appreciate receiving a copy of the relevant reports, or a short note indicating where they can be obtained or examined. We kindly request a response by March 9th since we plan to draft our report at the end of March.

Thank you for considering this request.

Yours truly,

Norman Giesbrecht
Project Coordinator
Northern Development Research Group

NG:pew

APPENDIX C

Interview Schedule With Company Personnel Managers

Interview Date: Name of Person:

Position: Years with Company:

Main industry company involved in and no. of employees:

1. What is the average length of employment for skilled and unskilled workers at your company?
2. What do you feel are the main benefits of the work situation as perceived by the workers?
3. What are the main drawbacks of the work situation as perceived by the workers? Are these drawbacks why employees leave?
4. What type of accommodation do you provide for the workers, if any?
5. To what extent does your company provide workers and the community with recreational facilities?
6. What are the main recreational activities the workers engage in?
7. Are there advantages to single men or married men with their families working in isolated areas?
8. In your opinion, is alcohol consumption more or less prevalent in geographically isolated areas than in urban centres?
9. What factors most likely lead to problem drinking in remote areas?
10. Which arrangement (single men or married with families) is more likely to have more problems related to alcohol? Explain.
11. Do some types of work situations, occupational groupings or ages contribute more to alcohol-related problems than others?
12. What type of alcohol-related problems show up most often during working hours? Are these key indicators?
13. What type of alcohol-related problems show up most often after work?
14. What methods or procedures are used for detecting and dealing with alcohol problems at an early stage?
15. Does your company have any programs to deal with alcohol-related problems? How long have these been in operation? In 1978 how many employees were involved in mandatory referrals or voluntary referrals for alcohol treatment?

APPENDIX C (contd.)

16. Is there any differences in outcome related to the type of program the employee is exposed to?
17. Which kinds of employees are most likely to respond to alcohol treatment programs or informal interventions (warnings or offers of assistance)?
18. What is the most effective method of improving a company's ability to detect and deal with alcohol problems among employees?
19. What are the best preventive approaches for dealing with alcohol-related problems in isolated areas?

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